CDV7 SERIES
Direct Vent Gas Fireplace

Models:

CDVR33N/PV7;N/PE7, CDVT33N/V7;N/PE7, CDVR36N/PV7;N/PE7, CDVT36N/V7;N/PE7, CDVR42N/PV7;N/PE7, CDVT42N/V7;N/PE7, CDVR47N/PV7;N/PE7, CDVT47N/V7;N/PE7

Monessen Hearth Systems Company

Installation and Operating Instructions

WARNINGS

IF THE INFORMATION IN THESE INSTRUCTIONS ARE NOT FOLLOWED EXACTLY, A FIRE OR EXPLOSION MAY RESULT CAUSING PROPERTY DAMAGE, PERSONAL INJURY OR LOSS OF LIFE.

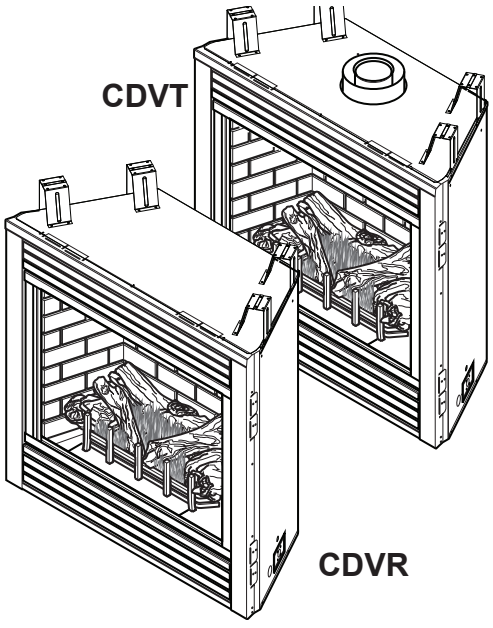
- Do not store or use gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.
- WHAT TO DO IF YOU SMELL GAS
  - Do not try to light any appliance.
  - Do not touch any electrical switch; do not use any phone in your building.
  - Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
  - If you cannot reach your gas supplier, call the fire department.
- Installation and service must be performed by a qualified installer, service agency or the gas supplier.

WARNING: Improper installation, adjustment, alteration, services or maintenance can cause injury or property damage. Refer to this manual. For assistance or additional information consult a qualified installer, service agency or the gas supplier.

This appliance may be installed in an aftermarket*, permanently located, manufactured home (USA only) or mobile home, where not prohibited by local codes.

This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases, unless a certified kit is used.

*** Aftermarket: Completion of sale, not for purpose of resale, from the manufacturer.**



DUE TO HIGH TEMPERATURES, THE APPLIANCE SHOULD BE LOCATED OUT OF TRAFFIC AND AWAY FROM FURNITURE AND DRAPERIES.

CHILDREN AND ADULTS SHOULD BE ALERTED TO THE HAZARDS OF HIGH SURFACE TEMPERATURE AND SHOULD STAY AWAY TO AVOID BURNS OR CLOTHING IGNITION.

YOUNG CHILDREN SHOULD BE SUPERVISED WHEN THEY ARE IN THE SAME ROOM AS THE APPLIANCE.

CLOTHING OR OTHER FLAMMABLE MATERIAL SHOULD NOT BE PLACED ON OR NEAR THE APPLIANCE.

KEEP THE ROOM AREA CLEAR AND FREE FROM COMBUSTIBLE MATERIALS, GASOLINE, AND OTHER FLAMMABLE VAPORS AND LIQUIDS.

INSTALLER: Leave this manual with the appliance. CONSUMER: Retain this manual for future reference.

69D3011 6/09 Rev. 4

PLEASE READ THE INSTALLATION & OPERATING INSTRUCTIONS BEFORE USING APPLIANCE.

Thank you and congratulations on your purchase of a MHSC fireplace.
IMPORTANT: Read all instructions and warnings carefully before starting installation.
Failure to follow these instructions fully may result in a possible fire hazard and will void the warranty.

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INSTALLER

Please leave these instructions with the appliance.

OWNER

Please retain these instructions for future reference.

WARNING

- **Read this owner's manual carefully and completely before trying to assemble, operate, or service this fireplace.**
- **Any change to this fireplace or its controls can be dangerous.**
- **Improper installation or use of this fireplace can cause serious injury or death from fire, burns, explosions, electrical shock and carbon monoxide poisoning.**

This fireplace is a vented product. This fireplace must be properly installed by a qualified service person. The glass door must be properly seated and sealed. If this unit is not properly installed by a qualified service person with glass door properly seated and sealed, combustion leakage can occur.

CARBON MONOXIDE POISONING: Early signs of carbon monoxide poisoning are similar to the flu with headaches, dizziness and/or nausea. If you have these signs, the fireplace may not have been installed properly. Get fresh air at once! Have the fireplace inspected and serviced by a qualified service person. Some people are more affected by carbon monoxide than others. These include pregnant women, people with heart or lung disease or anemia, those under the influence of alcohol, and those at high altitudes.

Propane/LP gas and natural gas are both odorless. An odor-making agent is added to each of these gases. The odor helps you detect a gas leak. However, the odor added to these gases can fade. Gas may be present even though no odor exists.

Make certain you read and understand all warnings. Keep this manual for reference. It is your guide to safe and proper operation of this fireplace.

1. This appliance is only for use with the type of gas indicated on the rating plate. This appliance is not convertible for use with other gases unless a certified kit is used.
2. For propane/LP fireplace, do not place propane/LP supply tank(s) inside any structure. Locate propane/LP supply tank(s) outdoors. To prevent performance problems, do not use propane/LP fuel tank of less than 100 lbs. capacity.
3. If you smell gas
   - shut off gas supply.
   - do not try to light any appliance.
   - do not touch any electrical switch; do not use any phone in your building .
   - immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
4. Never install the fireplace
   - in a recreational vehicle
   - where curtains, furniture, clothing, or other flammable objects are less than 42" from the front, top, or sides of the fireplace
   - in high traffic areas
   - in windy or drafty areas
5. This fireplace reaches high temperatures. Keep children and adults away from hot surfaces to avoid burns or clothing ignition. Fireplace will remain hot for a time after shutdown. Allow surfaces to cool before touching.
6. Carefully supervise young children when they are in the room with fireplace.
7. Do not modify fireplace under any circumstances. Any parts removed for servicing must be replaced prior to operating fireplace.
8. Turn fireplace off and let cool before servicing, installing, or repairing. Only a qualified service person should install, service, or repair the fireplace. Have burner system inspected annually by a qualified service person.
9. You must keep control compartments, burners, and circulating air passages clean. More frequent cleaning may be needed due to excessive lint and dust. Turn off the gas valve and pilot light before cleaning fireplace.
10. Have venting system inspected annually by a qualified service person. If needed, have venting system cleaned or repaired. See *Cleaning and Maintenance*, page 40.
11. Keep the area around your fireplace clear of combustible materials, gasoline, and other flammable vapor and liquids. Do not run fireplace where these are used or stored. Do not place items such as clothing or decorations on or around fireplace.
12. Do not use this fireplace to cook food or burn paper or other objects.
13. Never place anything on top of fireplace.
14. Do not use any solid fuels (wood, coal, paper, cardboard, etc.) in this fireplace. Use only the gas type indicated on rating plate.

Continued on page 4

15. This appliance, when installed, must be electrically grounded in accordance with local codes or in the absence of local codes, with the *National Electrical Code, ANSI/NFPA 70*, or the *Canadian Electrical Code, CSA C22.1.*
16. Do not obstruct the flow of combustion and ventilation air in any way. Provide adequate clearances around air openings into the combustion chamber along with adequate accessibility clearance for servicing and proper operation.
17. When the appliance is installed directly on carpeting, tile or other combustible material other than wood flooring, you must set appliance on a metal or wood panel or hearth pad extending the full width and depth of the appliance.
18. Do not use fireplace if any part has been exposed to or has been under water. Immediately call a qualified service person to arrange for replacement of the unit.
19. Do not operate fireplace if any log is broken.
20. Do not use a blower insert, heat exchanger insert, or any other accessory not approved for use with this fireplace.
21. Do not operate the fireplace with glass door removed, cracked, or broken.

WARNING

Never connect unit to private (non-utility) gas wells. This gas is commonly known as wellhead gas.

IMPORTANT:
PLEASE READ THE FOLLOWING CAREFULLY

It is normal for fireplaces fabricated of steel to give off some expansion and/or contraction noises during the start up or cool down cycle. Similar noises are found with your furnace heat exchanger or car engine.

IMPORTANT:
PLEASE READ THE FOLLOWING CAREFULLY

It is not unusual for gas fireplace to give off some odor the first time it is burned. This is due to the manufacturing process.

Please ensure that your room is well ventilated during burn off — open all windows.

It is recommended that you burn your fireplace for at least ten (10) hours the first time you use it. Place the fan switch in the “OFF” position during this time.

NATIONAL FIREPLACE INSTITUTE® NFI CERTIFIED www.nficertified.org

We recommend that our gas hearth products be installed and serviced by professionals who are certified in the U.S. by the National Fireplace Institute® (NFI) as NFI Gas Specialists.

CODE APPROVAL

Direct Vent type appliances draw all combustion air from outside of the dwelling through the vent pipe.

These appliances have been tested by CSA and found to comply with the established standards for DIRECT VENT GAS FIREPLACE HEATERS in the USA and Canada as follows:

LISTED VENTED GAS FIREPLACE HEATER

TESTED TO: ANSI Z21.88b-2008 / CSA 2.33b-2008 STANDARDS

A manufactured home (USA only) or mobile home OEM installation must conform with the **Manufactured Home Construction and Safety Standard, Title 24 CFR, Part 3280,** or when such a standard is not applicable, the **Standard for Manufactured Home Installations, ANSI/NCSBCS A225.1**, or **Standard for Gas Equipped Recreational Vehicles and Mobile Housing, CSA Z240.4**.

PRODUCT SPECIFICATIONS

- This appliance has been certified for use with either natural or propane gas. See appropriate data plates.
- This appliance is not for use with solid fuels.
- The appliance is approved for bedroom or bedsitting room installations.
- The appliance must be installed in accordance with local codes if any. If none exist use the current installation code. ANSI Z223.1/NFPA 54 in the USA, CSA B149 in Canada.
- This appliance is mobile home approved.
- The appliance must be properly connected to a venting system.
- The appliance is not approved for closet installations.
- This appliance is approved to be vented with Simpson-Duravent and MHSC Twist-Lock Direct Vent Components.

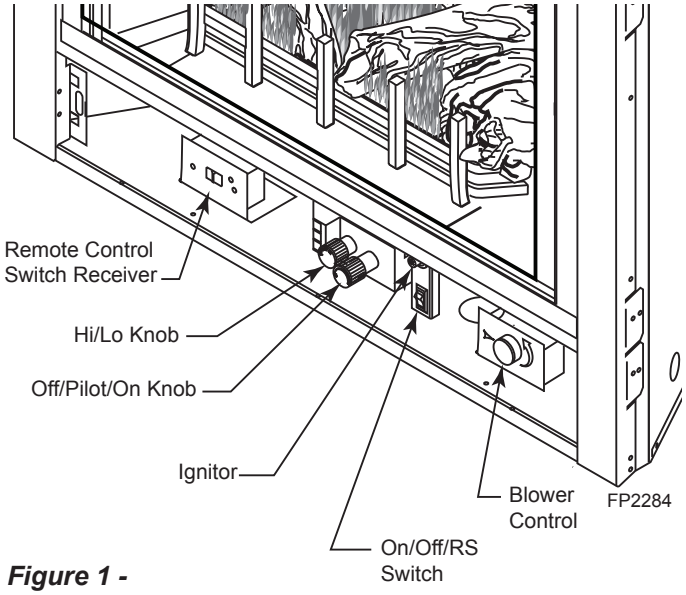


Figure 1 -
CDV7 Series Fireplace

The classification “noncombustible material” includes, but is not limited to stone, brick and mortar. Noncombustibles are safe to overlay the black-painted metal face (including radiant plates) and do not pose a fire hazard. Do not allow any noncombustible finish material to extend past or interfere with fireplace opening.

The classification “combustible material” includes, but is not limited to plywood, drywall and particle board. Combustible materials may contact the sides, bottom or back of firebox. Do not overlay the black painted face with combustible materials.

HIGH ELEVATIONS

Input ratings are shown in BTU per hour and are certified without deration for elevations up to 4,500 feet (1,370 m) above sea level.

For elevations above 4,500 feet (1,370 m) in USA, installations must be in accordance with the current ANSI Z223.1/NFPA 54 and/or local codes having jurisdiction.

In Canada, please consult provincial and/or local authorities having jurisdiction for installations at elevations above 4,500 feet (1,370 m).

GAS PRESSURES

	Natural	Propane (LP)
Inlet Minimum	5.5” w.c.	11.0” w.c.
Inlet Maximum	14.0” w.c.	14.0” w.c.
Manifold Pressure	3.5” w.c.	10.0” w.c.

GAS SPECIFICATIONS & ORIFICE SIZE

Model	Fuel	Max.Input BTU/h	Min. Input BTU/h	Orifice Size
CDVR33NV7	Nat.	18,000	13,000	#45
CDVR33PV7	LP	18,000	13,000	1.28 mm
CDVR33NE7	Nat.	18,000	13,000	#45
CDVR33PE7	LP	18,000	13,000	1.28 mm
CDVR36NV7	Nat.	20,000	15,000	#44
CDVR36PV7	LP	20,000	15,000	1.35 mm
CDVR36NE7	Nat.	20,000	15,000	#44
CDVR36PE7	LP	20,000	15,000	1.35 mm
CDVR42NV7	Nat.	24,000	17,000	2.35 mm
CDVR42PV7	LP	24,000	18,000	1.45 mm
CDVR42NE7	Nat.	24,000	17,000	2.35 mm
CDVR42PE7	LP	24,000	18,000	1.45 mm
CDVR47NV7	Nat.	24,000	17,000	2.35 mm
CDVR47PV7	LP	24,000	18,000	1.45 mm
CDVR47NE7	Nat.	24,000	17,000	2.35 mm
CDVR47PE7	LP	24,000	18,000	1.45 mm
CDVT33NV7	Nat.	18,000	13,000	#45
CDVT33PV7	LP	18,000	13,000	1.28 mm
CDVT33NE7	Nat.	18,000	13,000	#45
CDVT33PE7	LP	18,000	13,000	1.28 mm
CDVT36NV7	Nat.	20,000	15,000	#44
CDVT36PV7	LP	20,000	15,000	1.35 mm
CDVT36NE7	Nat.	20,000	15,000	#44
CDVT36PE7	LP	20,000	15,000	1.35 mm
CDVT42NV7	Nat.	24,000	17,000	2.35 mm
CDVT42PV7	LP	24,000	18,000	1.45 mm
CDVT42NE7	Nat.	24,000	17,000	2.35 mm
CDVT42PE7	LP	24,000	18,000	1.45 mm
CDVT47NV7	Nat.	24,000	17,000	2.35 mm
CDVT47PV7	LP	24,000	18,000	1.45 mm
CDVT47NE7	Nat.	24,000	17,000	2.35 mm
CDVT47PE7	LP	24,000	18,000	1.45 mm

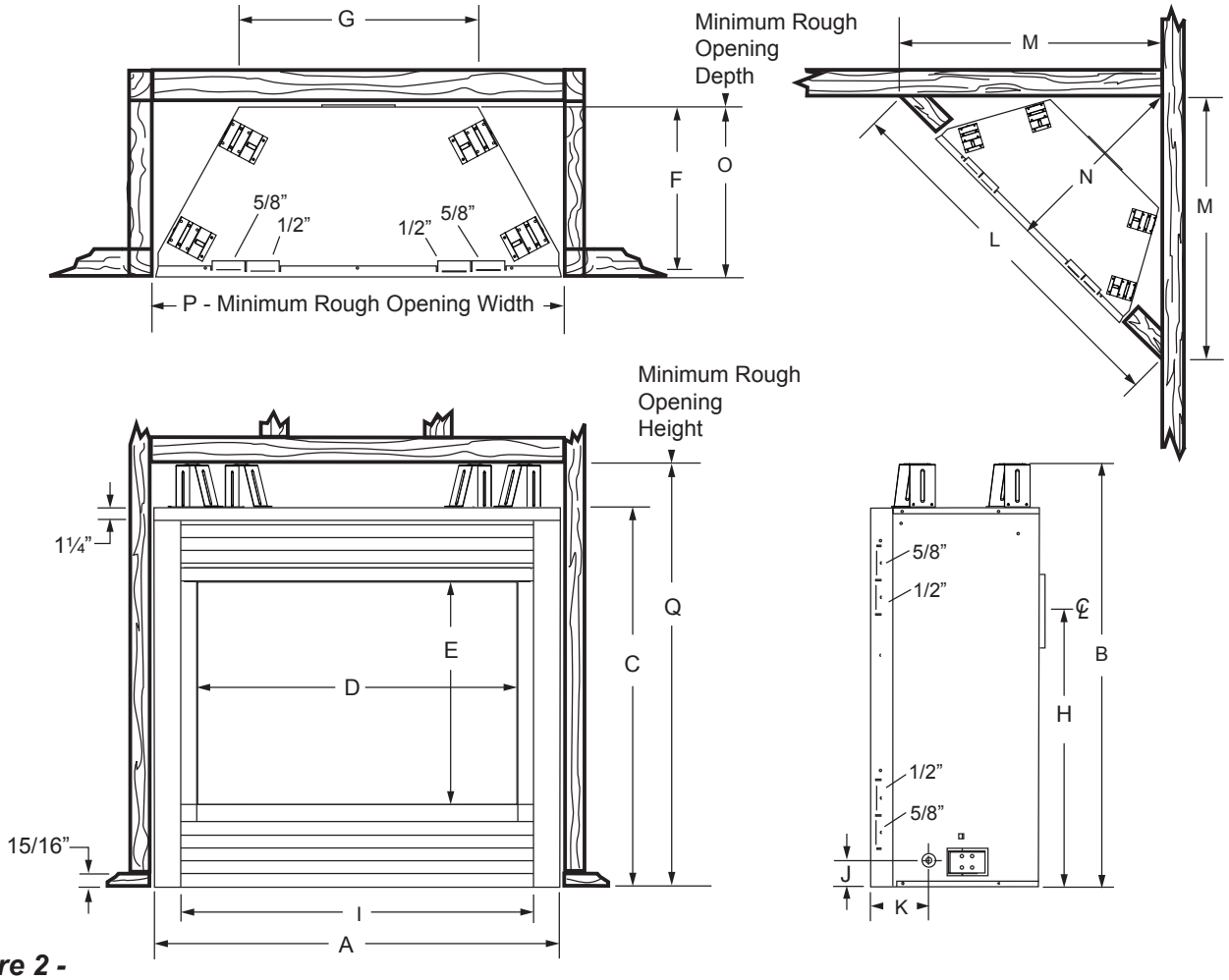


Figure 2 -
CDVR Series Fireplace Dimensions

	CDVR33	CDVR36	CDVR42	CDVR47
A	33"	37 1/16"	41"	47"
B	35 5/8"	38 5/8"	38 5/8"	38 5/8"
C	31 11/16"	34 9/16"	34 9/16"	34 9/16"
D	27 3/16"	29 1/16"	33 1/16"	39 1/16"
E	15 3/16"	20 3/8"	20 3/8"	20 3/8"
F	13 11/16"	15 3/4"	15 3/4"	15 3/4"
G	21 3/8"	21 7/8"	25 7/8"	31 7/8"
H	21 15/16"	25 1/4"	25 1/4"	25 1/4"
I	29 7/8"	32"	36"	42"
J	2 5/16"	2 3/8"	2 3/8"	2 3/8"
K	7 3/16"	5 7/16"	5 7/16"	5 7/16"
L	48 3/4"	52 7/16"	56 7/16"	62 7/16"
M	34 1/2"	37 1/16"	39 11/16"	43 7/8"
N	24 3/8"	26 1/4"	28 1/4"	31 1/4"
O	13 11/16"	15 1/4"	15 1/4"	15 1/4"
P	33 1/4"	37 1/2"	41 1/4"	47 1/4"
Q	35 7/8"	39"	39"	39"

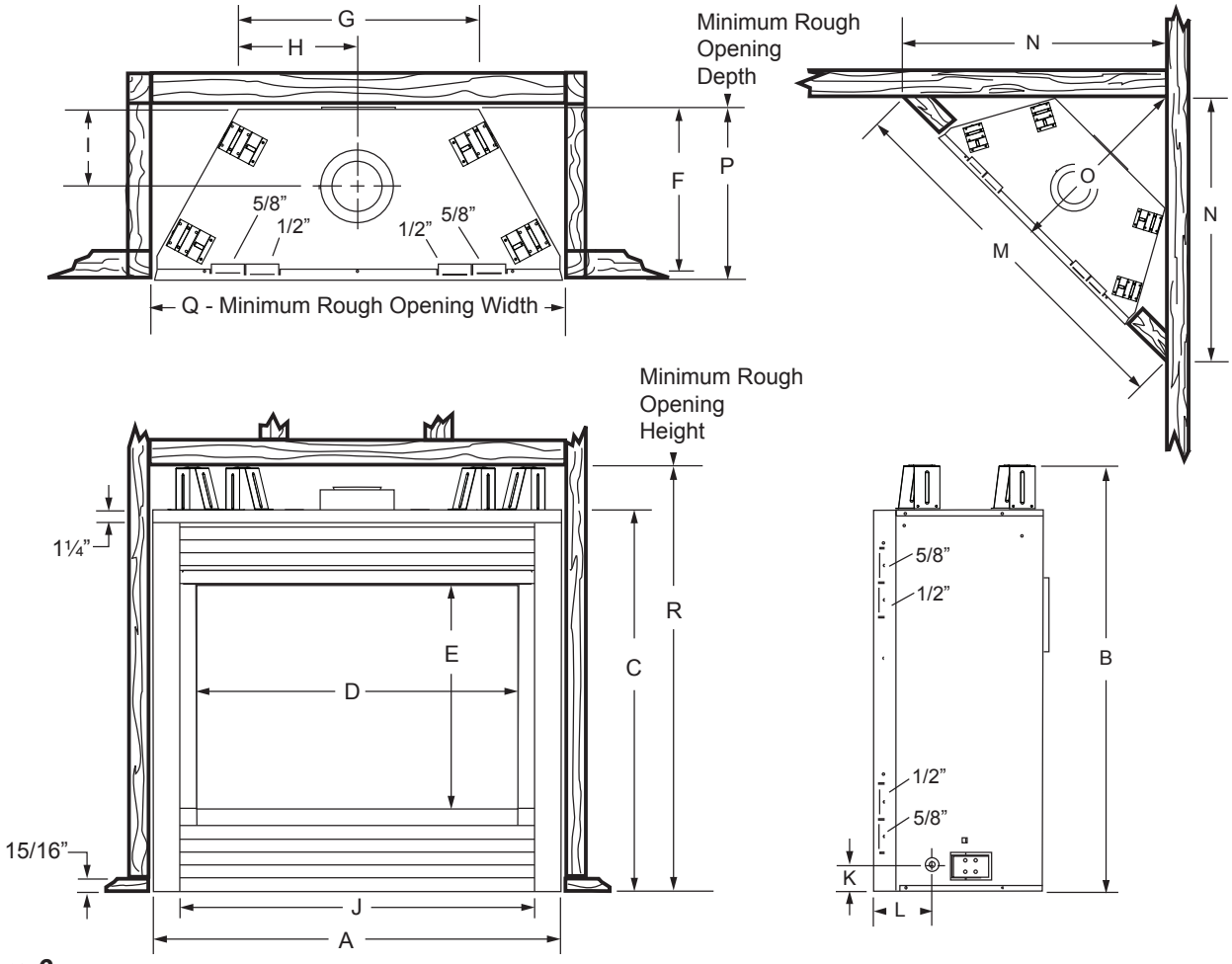


Figure 3 -
CDVT Series Fireplace Dimensions

	CDVT33	CDVT36	CDVT42	CDVT47
A	33"	37 1/16"	41"	47"
B	35 5/8"	38 5/8"	38 5/8"	38 5/8"
C	31 11/16"	34 9/16"	34 9/16"	34 9/16"
D	27 3/16"	29 1/16"	33 1/16"	39 1/16"
E	15 3/16"	20 3/8"	20 3/8"	20 3/8"
F	14 3/16"	15 3/4"	15 3/4"	15 3/4"
G	21 3/8"	21 7/8"	25 7/8"	31 7/8"
H	10 11/16"	10 15/16"	12 15/16"	15 15/16"
I	6 1/2"	6 1/2"	6 1/2"	6 1/2"
J	29 7/8"	32"	36"	42"
K	2 5/16"	2 3/8"	2 3/8"	2 3/8"
L	7 3/16"	5 7/16"	5 7/16"	5 7/16"
M	48 3/4"	52 7/16"	56 7/16"	62 7/16"
N	34 1/2"	37 1/16"	39 11/16"	43 7/8"
O	24 3/8"	26 1/4"	28 1/4"	31 1/4"
P	13 11/16"	15 1/4"	15 1/4"	15 1/4"
Q	33 1/4"	37 1/2"	41 1/4"	47 1/4"
R	35 7/8"	39"	39"	39"

BEFORE YOU START

Read this homeowner manual thoroughly and follow all instructions carefully. Inspect all contents for shipping damage and immediately inform your dealer if any damage is found. Do not install any unit with damaged, incomplete, or substitute parts. Check your packing list to verify that all listed parts have been received. You should have the following:

- Fireplace (Firebox and Burner System)
- Log Set
- Volcanic Rock
- Rock Wool

ITEMS REQUIRED FOR INSTALLATION

Tools:

- Phillips Screwdriver
- Hammer
- Saw and/or saber saw
- Electric Drill and Bits
- Pliers
- Square

Building Supplies:

- Framing Materials
- Wall Finishing Materials
- Level
- Tee Joint
- Measuring Tape
- Pipe Wrench

- Caulking Material (Noncombustible)
- Fireplace Surround Material (Noncombustible)
- Piping Complying with Local Codes
- Pipe Sealant Approved for use with Propane/LPG (Resistant to Sulfur Compounds)

FIREBOX FRAMING FOR CDVR

Firebox framing can be built before or after the appliance is set in place. Construct firebox framing following *Figure 2* for your specific installation requirements. *Refer to Figure 2* for firebox dimensions. The framing headers may rest on the top of the firebox standoffs. **Do not bring headers below top of standoffs.**

The firebox may be installed directly on a combustible floor or raised on a platform of an appropriate height. When the firebox is installed directly on carpeting, tile, or other combustible material, other than wood flooring, the firebox shall be installed on a metal or wood panel extending the full width and depth of the enclosure.

FIREBOX FRAMING FOR CDVT

Firebox framing can be built before or after the appliance is set in place. Construct firebox framing following *Figure 3* for your specific installation requirements. *Refer to Figure 3* for firebox dimensions. The framing headers may rest on the top of the firebox standoffs. **Do not bring headers below top of standoffs.**

The firebox may be installed directly on a combustible floor or raised on a platform of an appropriate height. When the firebox is installed directly on carpeting, tile, or other combustible material, other than wood flooring, the firebox shall be installed on a metal or wood panel extending the full width and depth of the enclosure.

WARNING

Do not fill spaces around firebox with insulation or other materials. This could cause a fire.

NOTE

COLD CLIMATE INSULATION

If you live in a cold climate, seal all cracks around your appliance, and wherever cold air could enter the room, with noncombustible material. It is especially important to insulate the outside chase cavity between the studs and under the floor on which the appliance rests, if the floor is above ground level.

FIREPLACE LOCATION

Plan for the installation of your appliance. This includes determining where the unit is to be installed, the vent configuration to be used, framing and finishing details, and whether any optional accessories (i.e. blower, wall switch, or remote control) are desired. Consult your local building code agency to ensure compliance with local codes, including permits and inspections.

The following factors should be taken into consideration:

- Clearance to side-wall, ceiling, woodwork, and windows. Minimum clearances to combustibles **must be maintained.**
- This fireplace may be installed along a wall, across a corner, or use an exterior chase. Refer to *Figure 4* for suggested locations.
- Location should be out of high traffic areas and away from furniture and draperies due to heat from appliance.
- Never obstruct the front opening of the fireplace.
- Do **not** install in the vicinity where gasoline or other flammable liquids may be stored.
- Vent pipe routing. See *Venting* section found in this manual for allowable venting configurations.
- These units can be installed in a bedroom. See National Fuel Gas Code ANSI Z233.1/NFPA 54 — (current edition), the Uniform Mechanical Code — (current edition), and Local Building Codes for specific installation requirements.

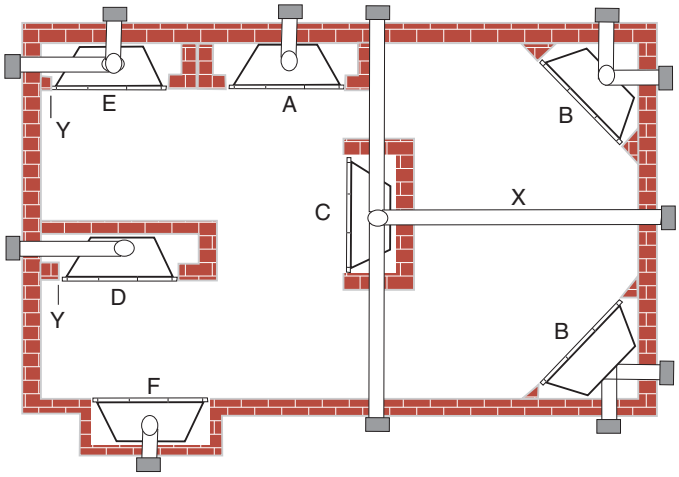


Figure 4 -
Locating Gas Fireplace

A Flat on Wall
B Cross Corner
C Island**
D Room Divider*
E Flat on Wall Corner*
F Chase Installation
Y 4" Minimum

** Island (C) and room divider (D) installation is possible as long as the horizontal portion of vent system (X) does not exceed 20'.

* When you install your fireplace in (D) room divider or (E) flat on wall corner positions (Y), a minimum of 4" clearance must be maintained from perpendicular wall and front of fireplace.

CLEARANCES TO COMBUSTIBLES

WARNING

Follow these instructions carefully to ensure safe installation. Failure to follow instructions exactly can create a fire hazard.

The appliance cannot be installed on a carpet, tile or other combustible material other than wood flooring. If installed on carpet or vinyl flooring, the appliance shall be installed on a metal, wood or noncombustible material panel extending full width and depth of the appliance.

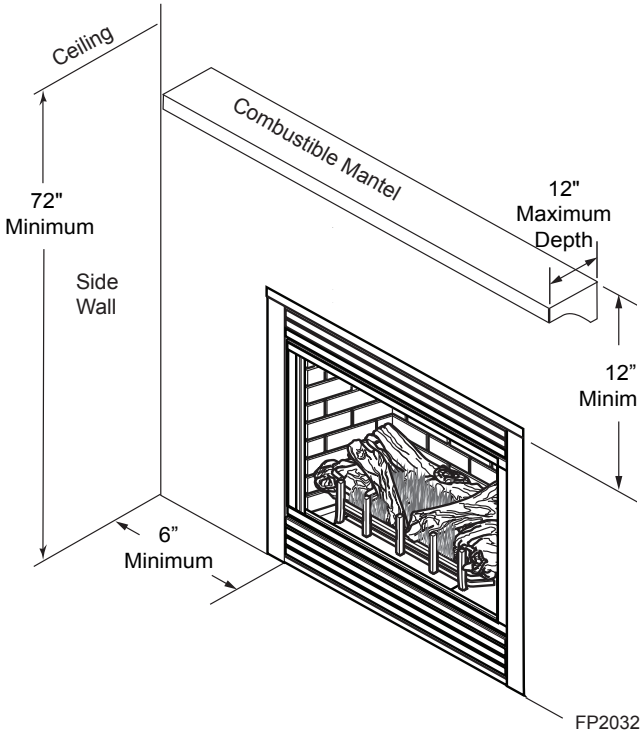
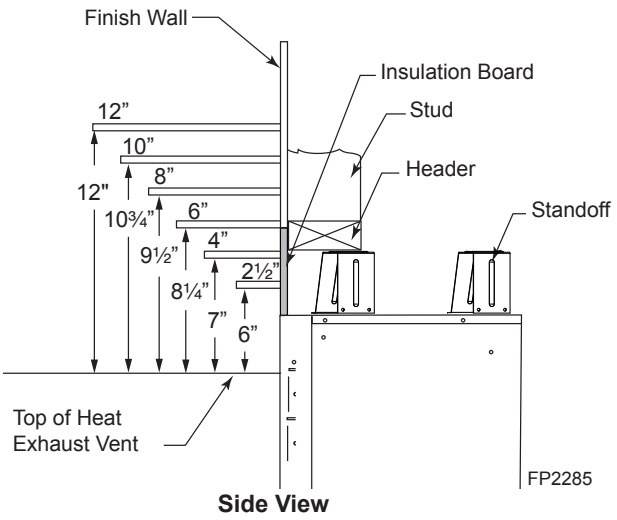
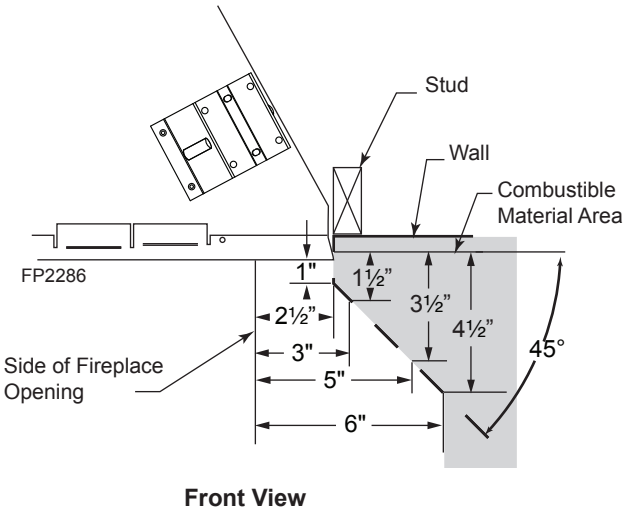


Figure 5 -
Ceiling and Side Wall Clearances





MANTEL CLEARANCES

NOTE: The combustible area above the facing must not protrude more than 3/4" from the facing. If it does, it is considered a mantel and must meet the mantel requirements listed in this manual.

Figure 6 -
Mantel Clearances

WARNING

Never obstruct or modify the air inlet or outlet grilles (louvers). This may create a fire hazard.

The fireplace must be secured to the floor and/or to framing studs as shown in *Figure 7*. Use two (2) wood screws or masonry/ concrete screws to secure fireplace to the floor. Use four (4) screws to attach fireplace to framing. The side nailing flanges are 1/2" or 5/8" to accommodate different wall thickness.

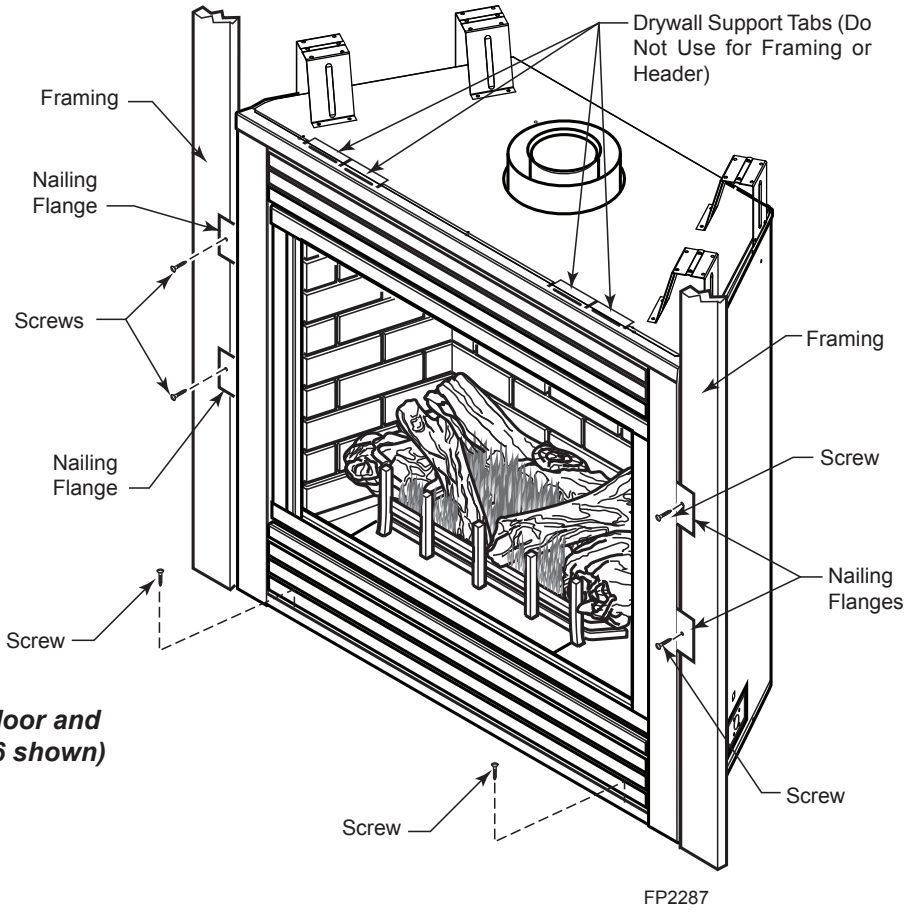


Figure 7 - Securing Fireplace to Floor and Framing Studs (CDVT36 shown)

FINISHING MATERIAL

NOTE: Any wiring (i.e. remote control, wall switch, and optional fan) must be done prior to final finishing to avoid costly reconstruction.

Only noncombustible materials (i.e. brick, tile, slate, steel, or other materials with a UL fire rating of Zero) may be used to cover the black surface of the appliance. A 300°F minimum adhesive may be used to attach facing materials to the black surface. If joints between the finished wall and the fireplace surround are sealed, a 300°F minimum sealant material (General Electric RTV103 or equivalent) must be used.

WARNING **Read all instructions completely and thoroughly before attempting installation. Failure to do so could result in serious injury, property damage or loss of life. Operation of improperly installed and maintained venting system could result in serious injury, property damage or loss of life.**

INSTALLATION PRECAUTIONS

Consult local building codes before beginning the installation. The installer must make sure to select the proper vent system for installation. Before installing vent kit, the installer must read this fireplace manual and vent kit instructions.

Only a qualified installer/service person should install venting system. The installer must follow these safety rules:

- Wear gloves and safety glasses for protection.
- Use extreme caution when using ladders or when on rooftops.
- Be aware of electrical wiring locations in walls and ceilings.

The following actions will void the warranty on your venting system:

- Installation of any damaged venting component.
- Unauthorized modification of the venting system.
- Installation of any component part not manufactured or approved by MHS.
- Installation other than permitted by these instructions.

NOTICE **Failure to follow these instructions will void the warranty.**

WARNING **This fireplace must be vented to the outside. The venting system must NEVER be attached to a chimney serving a separate solid fuel burning appliance. Each gas appliance must use a separate vent system. Do not use common vent systems.**

GENERAL VENTING

Your fireplace is approved to be vented either through the side wall, or vertical through the roof.

- **Only MHSC venting components specifically approved and labelled for this fireplace may be used.**
- Flexible UL1777 listed venting may be used in any venting application where rigid direct vent components can be used. All restrictions, clearances and allowances that pertain to the rigid piping apply to the flexible venting.
  Flex kits may not be modified. Flex kits may be added to the end of a vent run made of rigid vent sections using pipe manufacturer's approved flex to pipe adapters. This may occur only if doing so does not violate any of the venting length, height, routing, horizontal to vertical raito requirements or clearance considerations detailed in this manual.
- Venting terminals shall not be recessed into a wall or siding.
- Horizontal venting which incorporates the twist lock pipe must be installed on a level plane without an inclining or declining slope.
- Horizontal venting which incorporates the use of flex venting shall have an inclining slope from the unit of 1" (25 mm) per 24" (610 mm).

There must not be any obstruction such as bushes, garden sheds, fences, decks or utility buildings within 24" (610 mm) from the front of the termination hood.

Do not locate termination hood where excessive snow or ice build up may occur. Be sure to check vent termination area after snow falls, and clear to prevent accidental blockage of venting system. When using snow blowers, make sure snow is not directed towards vent termination area.

Location of Vent Termination

It is imperative the vent termination be located observing the minimum clearances as shown on following page.

WARNING **Always maintain minimum clearances around vent systems. The minimum clearances to combustibles for horizontal vent pipe are 3" at the top* and 1" at the sides and bottom of the vent system until the pipe penetrates the nearest vertical wall (1" required). A 1" minimum clearance all around the pipe must be maintained at outside wall and on vertical runs. Do not pack the open air spaces with insulation or other materials. This could cause high temperatures and may present a fire hazard.**
*** Unless the vertical run is 7½ feet or higher (top vent units only), the clearances for the horizontal run is 1" at the top.**

GENERAL VENTING INFORMATION - TERMINATION LOCATION

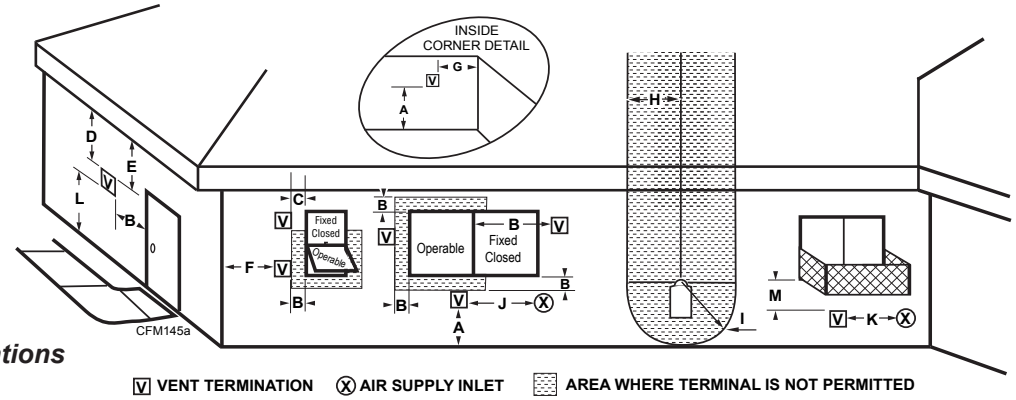


Figure 8 - Termination Locations

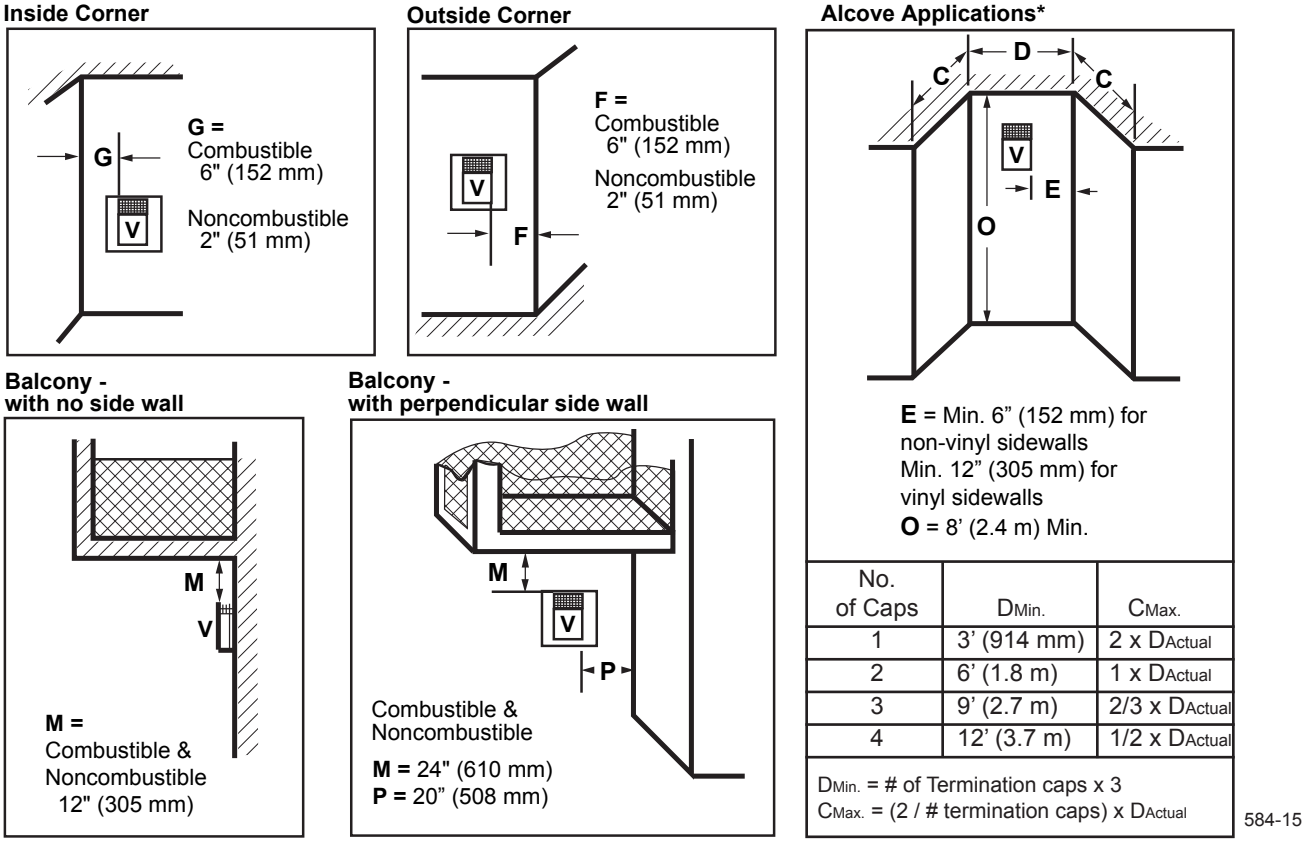
	Canadian Installations[1]	US Installations[2]
A = Clearance above grade, veranda, porch, deck, or balcony	12” (30 cm)	12” (30 cm)
B = Clearance to window or door that may be opened	6” (15 cm) for appliances < 10,000BTU/h (3kW), 12” (30 cm) for appliances > 10,000 Btuh (3kW) and < 100,000 BTU/h (30kW), 36” (91 cm) for appliances > 100,000 BTU/h (30kW)	6” (15 cm) for appliances < 10,000 BTU/h (3kW), 9” (23 cm) for appliances > 10,000 Btuh (3kW) and < 50,000 BTU/h (15kW), 12” (30 cm) for appliances > 50,000 BTU/h(15kW)
C = Clearance to permanently closed window	12” (305 mm) recommended to prevent window condensation	12” (305 mm) recommended to prevent window condensation
D = Vertical clearance to ventilated soffit located above the terminal within a horizontal distance of 2’ (610mm) from the center line of the terminal	18” (458 mm)	18” (458 mm)
E = Clearance to unventilated soffit	12” (305 mm)	12” (305 mm)
F = Clearance to outside corner	see next page	see next page
G = Clearance to inside corner (see next page)	see next page	see next page
H = Clearance to each inside of center line extended above meter/regulator assembly	3’ (91 cm) within a height of 15’ (5 m) above the meter/regulator assembly	3’ (91 cm) within a height of 15’ (5 m) above the meter/regulator assy
I = Clearance to service regulator vent outlet	3’ (91 cm)	3’ (91 cm)
J = Clearance to nonmechanical air supply inlet to building or the combustion air inlet to any other appliances	6” (15 cm) for appliances < 10,000 BTU/h (3kW), 12” (30 cm) for appliances > 10,000 BTU/h (3kW) and < 100,000 Btuh (30kW), 36” (91 cm) for appliances > 100,000 BTU/h (30kW)	6” (15 cm) for appliances < 10,000 BTU/h (3kW), 9” (23 cm) for appliances > 10,000 BTU/h (3kW) and < 50,000 BTU/h (15kW), 12” (30 cm) for appliances > 50,000 BTU/h(15kW)
K = Clearance to a mechanical air supply inlet	6’ (1.83 m)	3’ (91 cm) above if within 10' (3 m) horizontally
L = Clearance above paved sidewalk or paved driveway located on public property	7’ (2.13 m)†	7’ (2.13 m)†
M = Clearance under veranda, porch, deck or balcony	12” (30 cm)‡	12” (30cm)‡

1 In accordance with the current CSA-B149 Installation Codes
2 In accordance with the current ANSI Z223.1/NFPA 54 National Fuel Gas Codes
† A vent shall not terminate directly above a sidewalk or paved driveway which is located between two single family dwellings and serves both dwellings
‡ only permitted if veranda, porch, deck or balcony is fully open on a minimum 2 sides beneath the floor:

NOTE: 1. Local codes or regulations may require different clearances.
2. The special venting system used on Direct Vent Fireplaces are certified as part of the appliance, with clearances tested and approved by the listing agency.
3. MHSC assumes no responsibility for the improper performance of the appliance when the venting system does not meet these requirements.

Termination Clearances

Termination clearances for buildings with combustible and noncombustible exteriors.



No. of Caps	$D_{Min.}$	$C_{Max.}$
1	3' (914 mm)	2 x D_{Actual}
2	6' (1.8 m)	1 x D_{Actual}
3	9' (2.7 m)	2/3 x D_{Actual}
4	12' (3.7 m)	1/2 x D_{Actual}

$D_{Min.}$ = # of Termination caps x 3
$C_{Max.}$ = (2 / # termination caps) x D_{Actual}

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***NOTE:** Termination in an alcove space (spaces open only on one side and with an overhang) is permitted with the dimensions specified for vinyl or non-vinyl siding and soffits. 1. There must be a 3' (914 mm) minimum between termination caps. 2. All mechanical air intakes within 10' (1 m) of a termination cap must be a minimum of 3' (914 mm) below the termination cap. 3. All gravity air intakes within 3' (914 mm) of a termination cap must be a minimum of 1' (305 mm) below the termination cap.

Figure 9 - Termination Clearances

GENERAL INFORMATION ASSEMBLING VENT PIPES

USA Installations

The venting system must conform to local codes and/or the current National Fuel Code ANSI Z223.1/NFPA 54.

Only venting components manufactured by MHSC may be used in Direct Vent systems.

Canadian Installations

The venting system must be installed in accordance with the current CSA-B149.1 installation code.

Flex Vent Pipes

Before joining the flex vent pipe to the unit, apply a bead of high temperature sealant* (provided) to the 4" pipe exiting the fireplace. Secure flex vent pipe in place with a hose clamp (provided).

*Be sure the flex pipe overlaps at least 1" (25 mm) onto the collars of the fireplace and termination. If the termination has an internal bead, be sure to overlap and secure 1" (25 mm) past the bead.

* Be sure the vent is actually crushed before proceeding. Apply a tug to be sure the vent will not slip off the collars. Repeat process with 7" flex vent pipe. The same procedure must be performed on the vent side.

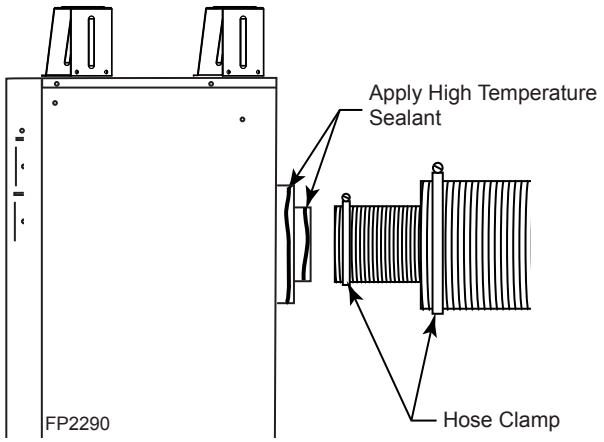


Figure 10 - Apply high temperature sealant to 4" and 7" pipes.

TWIST LOCK PIPES

When using twist lock pipe it is not necessary to use sealant on the joints. The only areas of the venting system that need to be sealed with high temperature silicone sealant are the sliding joints of any telescopic vent section used in the system.

To join twist lock pipes together, simply align the beads of the male end with the grooves of the female end, twisting the pipe until the flange on the female end contacts external flange on the male end. It is recommended that you secure the joints with three (3) sheet metal screws, however, this is not mandatory with twist lock pipe. *Figure 11*

To make it easier to assembly the joints, we suggest putting a lubricant (Vaseline or similar) on the male end of the twist lock pipe prior to assembly.

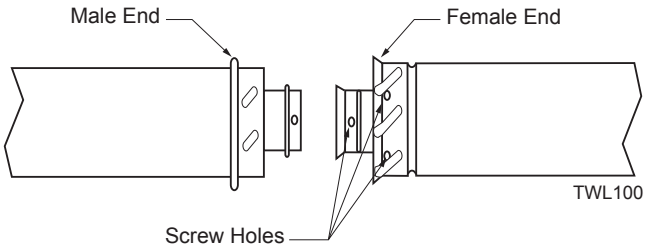


Figure 11 -
Twist-lock Pipe Joints

HOW TO USE THE VENT GRAPH

The Vent Graph should be read in conjunction with the following vent installation instructions to determine the relationship between the vertical and horizontal dimensions of the vent system.

1. Determine the height of the center of the horizontal vent pipe exiting through the outer wall. Using this dimension on the Sidewall Vent Graph, *Figure 12*, locate the point intersecting with the slanted graph line.
2. From the point of this intersection, draw a vertical line to the bottom of the graph.
3. Select the indicated dimension, and position the fireplace in accordance with same.

EXAMPLE A:
If the vertical dimension from the floor of the unit is 11’ (3.4 m) the horizontal run to the face of the outer wall must not exceed 14’ (4.3 m).

EXAMPLE B:
If the vertical dimension from the floor of the unit is 7’ (2.1 m), the horizontal run to the face of the outer wall must not exceed 8½’ (2.6 m).

Refer to *Page 22* for requirements for snorkels.

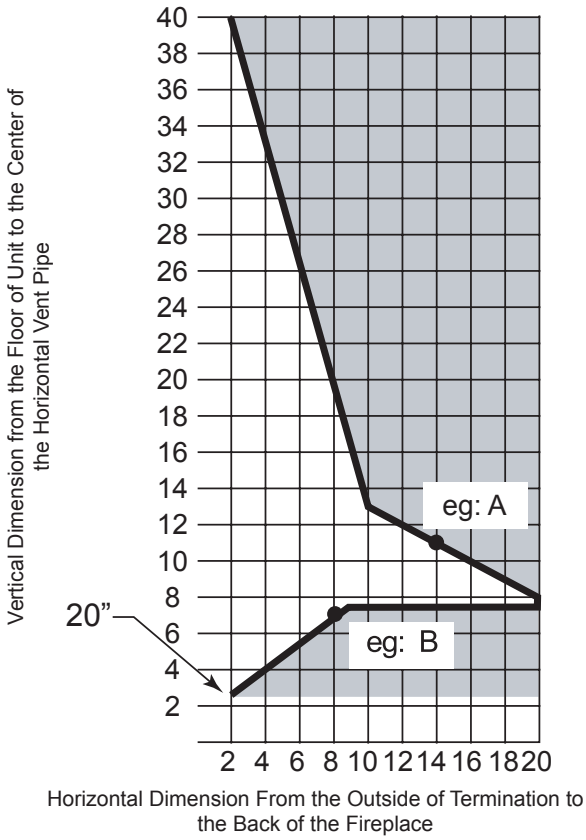


Figure 12 -
Side Wall Venting Graph

VENT PIPE CLEARANCES

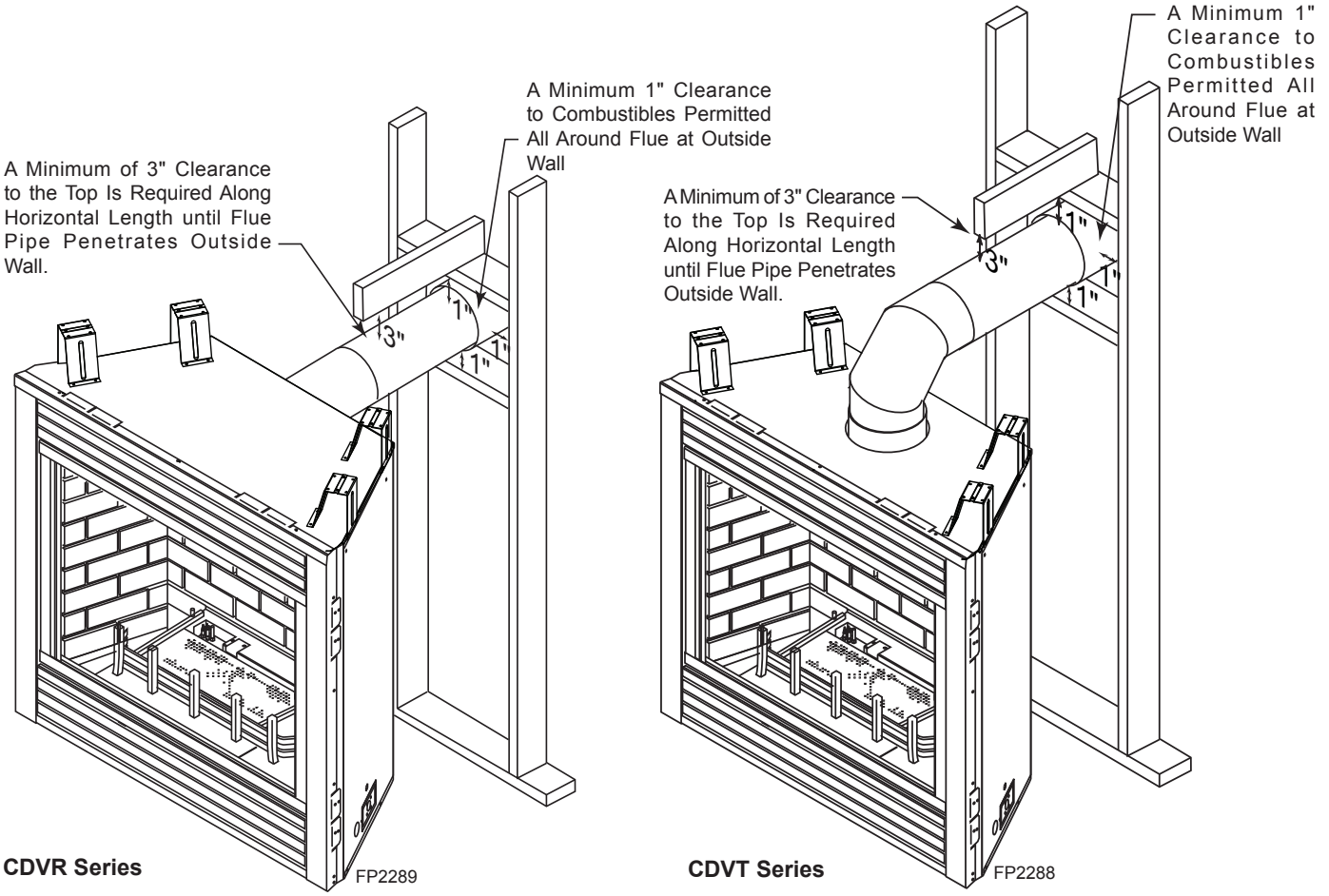

A Minimum of 3" Clearance to the Top Is Required Along Horizontal Length until Flue Pipe Penetrates Outside Wall.
A Minimum 1" Clearance to Combustibles Permitted All Around Flue at Outside Wall
3"
1"
1"
1"
CDVR Series
FP2289
A Minimum 1" Clearance to Combustibles Permitted All Around Flue at Outside Wall
A Minimum of 3" Clearance to the Top Is Required Along Horizontal Length until Flue Pipe Penetrates Outside Wall.
3"
1"
1"
1"
CDVT Series
FP2288

Figure 13 -
Combustible Clearances for Vent Pipe

WARNING

Rear Vent: Horizontal sections of this vent system require a minimum of 3" clearances to combustibles at the top of the flue and 1" clearance at the sides and bottom *until the flue penetrates the outside wall.* A minimum 1" clearance all around the flue is acceptable at this point of penetration.

Vertical sections of this vent system require a minimum of 1" clearance to combustibles on all sides of the pipe.

WARNING

Top Vent: Horizontal sections of this vent system require a minimum of 3" clearances to combustibles at the top of the flue and 1" clearance at the sides and bottom *until the flue penetrates the outside wall.* A minimum 1" clearance all around the flue is acceptable at this point of penetration. If vertical rise is 7 1/2 feet or higher when top venting, the clearance to combustibles is 1" on all sides of the horizontal run.

Vertical sections of this vent system require a minimum of 1" clearance to combustibles on all sides of the pipe.

REAR WALL VENT APPLICATION

When installed as a rear vent unit this appliance may be vented directly to a termination located on the rear wall behind the appliance.

- Only MHSC venting components are approved to be used in these applications (Refer to 'Venting Components' listed for different installation requirements).
- The maximum horizontal distance between the rear of the appliance (or end of the transition elbow in a corner application) and the outside face of the rear wall is 20" (508 mm). *Figure 14*
- Only one 45° elbow is allowed in these installations.
- Minimum clearances between vent pipe and combustible materials are as follows:
  Top - 3" (76 mm)
  - except at outside wall 1" (25 mm)
  Sides - 1" (25 mm)
  Bottom - 1" (25 mm)

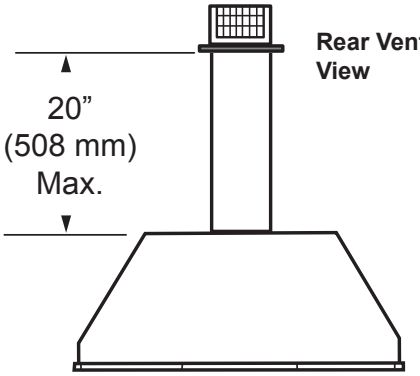


Figure 14 -
Rear Vent Application, No Elbows

REAR WALL VENT INSTALLATION - TWIST LOCK PIPE

Step 1

Locate and cut the vent opening in the wall.

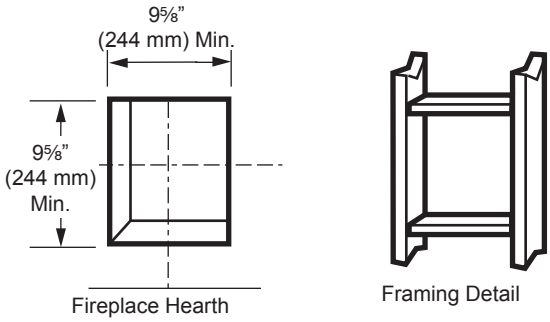
For combustible walls first frame in opening. *Figure 15*

NOTE: When using flex vent, the opening will have to be measured according to the 1" (25 mm) rise in 24" (610 mm) vertical run.

Combustible Walls: Cut a 9⅝"H x 9⅝" W (244 x 244 mm) hole through the exterior wall and frame as shown. *Figure 15*

Noncombustible Walls: Hole opening should be 7½" (191 mm) diameter.

Vent Opening for Combustible Walls



Opening for Noncombustible Wall

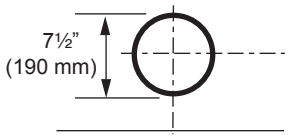


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Figure 15 -
Locate vent opening on wall.

Step 2

Secure firestop to the inside frame, center in the 9⅝" x 9⅝" vent opening.

Step 3

Measure the horizontal length requirement for the venting including a 2" (51 mm) overlap, i.e. from the elbow to the outside wall face plus 2" (51 mm). *Figure 14*

Step 4

Install the 4" (102 mm) vent to the appliance collar and secure with 3 sheet metal screws. Install the 7" (178 mm) vent pipe to the appliance collar and secure with 3 sheet metal screws. It is not necessary to seal this connection. If a 45° elbow is being used attach the elbow to the appliance in the same manner then attach the venting to the elbow.

It is critical that there is no downward slope away from the appliance when connecting the vent or elbow.

Step 5

Guide the venting through the vent hole as you place the appliance in its installed position. Guide the 4" (102 mm) and 7" (178 mm) collar of the vent termination into the outer ends of the venting. Do not force the termination. If the vent pipes do not align with the termination, remove and realign the venting at the appliance flue collars. *Figure 16*. Attach the termination to the wall as outlined in the instruction sheet supplied with the termination.

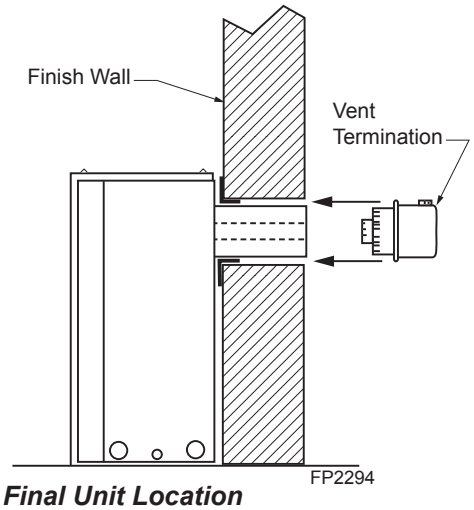


Figure 16 -
Side View of Final Unit Location

REAR WALL VENT INSTALLATIONS - FLEX VENT PIPE

Follow Steps 1 and 2 on Page 17.

Step 3

Install the 4" (102 mm) flex vent pipe to the appliance collars described in "General Information Assembling Vent Pipes", Page 12. If the installation requires a 45° angle, grasp the vent pipe close to the appliance collar and bend to 45°. DO NOT exceed 45°. *Figure 17*

Install the 7" vent pipe in the same manner as Step 2.
NOTE: There must be a 1/2" (13 mm) rise in a 12" (305 mm) length of flex vent.

Step 4

Assemble the flex vent to the collars on the termination as you did on the appliance.

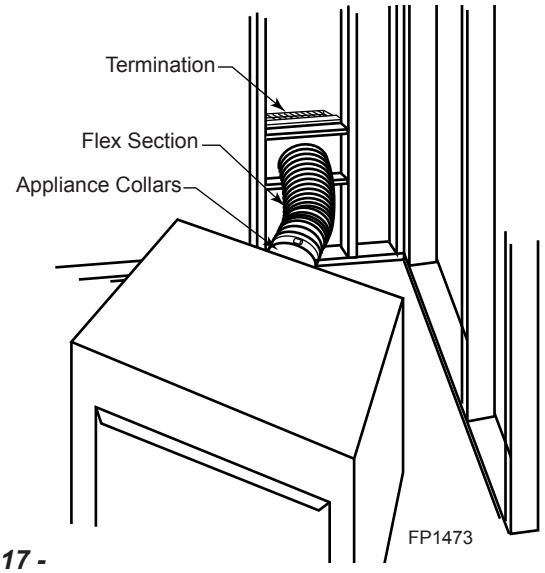


Figure 17 -
Grasp the vent pipe close to the collar and bend to 45° angle. do not exceed 45°.

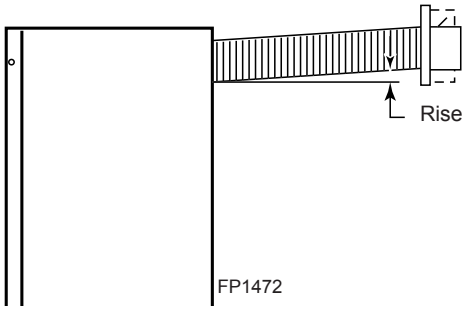


Figure 18 -
There must be a 1/2" rise per foot length

TOP VENT SIDEWALL APPLICATION

NOTE: For all top vent installations where a 90° elbow is the first pipe piece towards a sidewall termination (up and out), an open-center ringed flue restrictor must be installed onto the top edge of the firebox flue adapter. To create this open-center restrictor, twist and break off the center rib of the supplied flue restrictor. The installed part should appear similar to that show n in *Figure 19.*

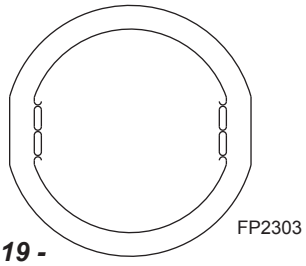


Figure 19 -
Top Vent Vertical Sidewall Restrictor

Since it is very important that the venting system maintain its balance between the combustion air intake and the flue gas exhaust, certain limitations as to vent configurations apply and must be strictly adhered to.

The Vent Graph, showing the relationship between vertical and horizontal side wall venting, will help to determine the various dimensions allowable.

Minimum clearance between vent pipes and combustible materials is 3" (76 mm) on top, and 1" (25 mm) on the bottom and sides unless otherwise noted.

When vent termination exits through foundations less than 20" (508 mm) below siding outcrop, the vent pipe must flush up with the siding.

It is best to locate the fireplace in such a way that minimizes the number of offsets and horizontal vent length.

The horizontal vent run refers to the total length of vent pipe from the flue collar of the fireplace (or the top of the Transition Elbow) to the face of the outer wall.

Horizontal plane means no vertical rise exists on this portion of the vent assembly.

When installing the appliance as a rear vent unit, the 90° or 45° Transition Elbow attached directly to the rear of the unit is NOT INCLUDED in the following criteria and calculations, and unless specifically mentioned should be ignored when calculating venting layouts.

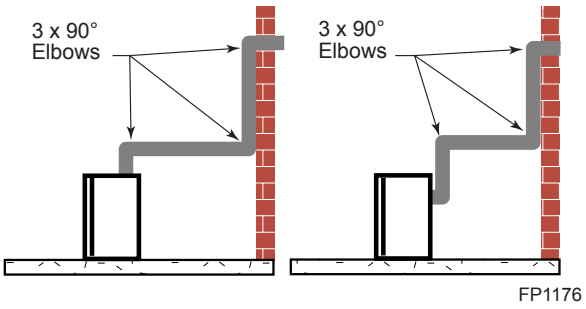


Figure 20 -
Maximum three (3) 90° elbows per installation

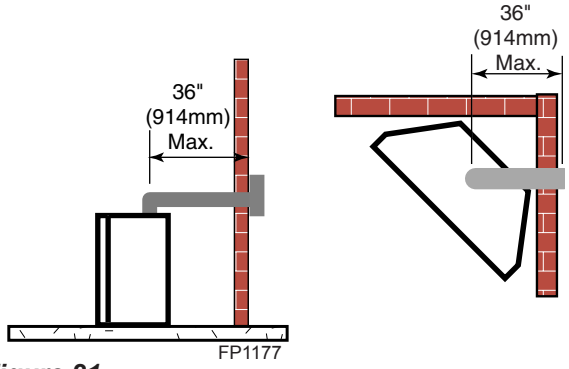


Figure 21 -
Maximum horizontal run with no rise

- The maximum number of 90° elbows per side wall installation is three (3). *Figure 20*
- If a 90° elbow is fitted directly on top of the fireplace flange the maximum horizontal vent run before the termination or a vertical rise is 36" (914 mm). *Figure 21*
- If a 90° elbow is used in the horizontal vent run (level height maintained) the horizontal vent length is reduced by 36" (914 mm). *Figures 21 & 22.* This does not apply if the 90° elbows are used to increase or redirect a vertical rise. *Figure 20*

Example: According to the vent graph (Page 15) the maximum horizontal vent length in a system with a 7½' (2.3 m) rise is 20' (6 m) and if a 90° elbow is required in the horizontal vent it must be reduced to 17' (5.2 m).

In *Figures 23 & 24*, dimension A plus B must not be greater than 17' (5.2m)

- The maximum number of 45° elbows permitted per installation is six (6). These elbows can be installed in either the vertical or horizontal run.
- For each 45° elbow installed in the horizontal run, the length of the horizontal run MUST be reduced by 18" (457 mm). This does not apply if the 45° elbows are installed on the vertical part of the vent system.
- The maximum number of elbow degrees in a system is 270°. *Figure 24*

Example: Elbow 1 = 90°
Elbow 2 = 45°
Elbow 3 = 45°
Elbow 4 = 90°
Total angular variation = 270°

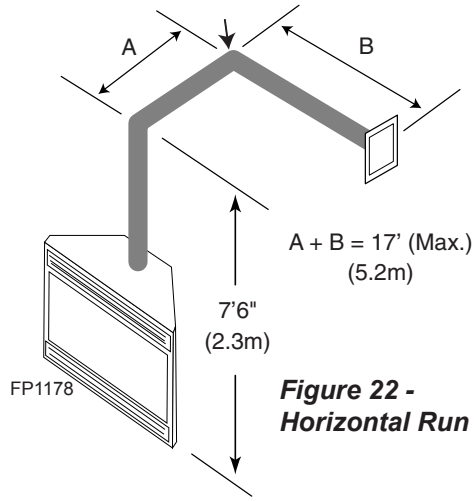


Figure 22 -
Horizontal Run Reduction

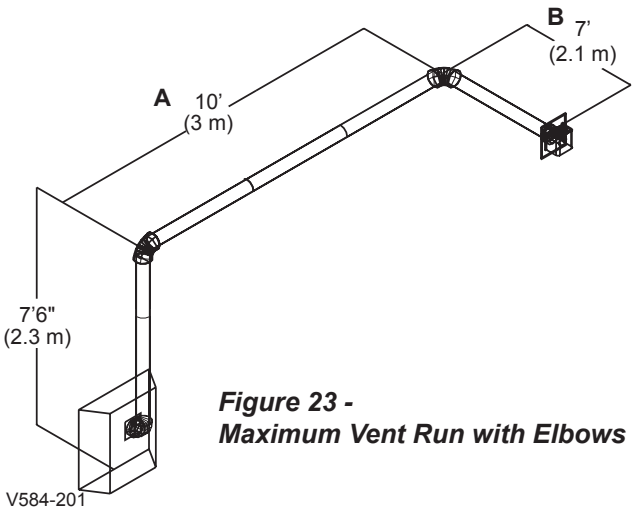


Figure 23 -
Maximum Vent Run with Elbows

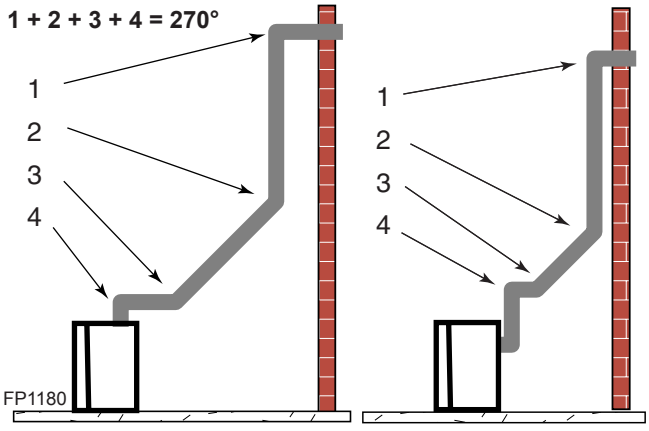


Figure 24 -
Maximum Elbow Usage

VERTICAL SIDEWALL INSTALLATION - TWIST LOCK PIPE

Step 1

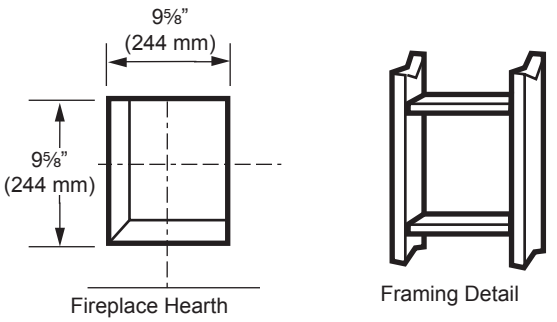
Locate vent opening on the wall. It may be necessary to first position the fireplace and measure to obtain hole location. Depending on whether the wall is combustible or noncombustible, cut opening to size. *Figure 25* (For combustible walls first frame in opening.)

NOTE: When using flex vent, the opening will have to be measured according to the 1/2" (13 mm) rise in 12" (305 mm) vent run.

Combustible Walls: Cut a 9⅝"H x 9⅝"W (244 x 244 mm) hole through the exterior wall and frame as shown. *Figure 25*

Noncombustible Walls: Hole opening must be 7½" (191 mm) in diameter.

Vent Opening for Combustible Walls



Opening for Noncombustible Wall

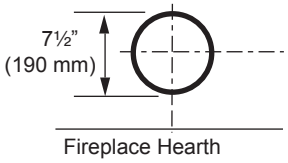


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Figure 25 - Locate Vent Opening on Wall

Step 2

Secure firestop to the inside frame, center in the 9⅝" x 9⅝" vent opening.

Step 3

Place fireplace into position. Measure the vertical height (X) required from the base of the flue collars to the center of the wall opening. *Figure 26*

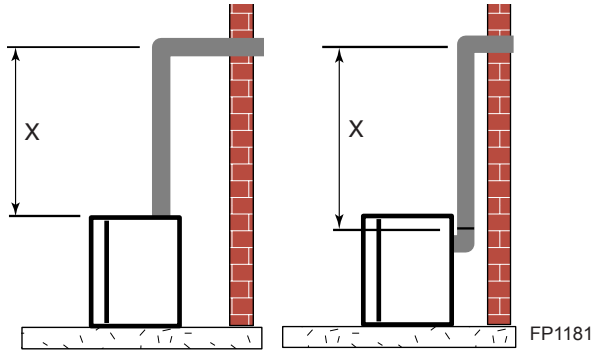


Figure 26 - Vertical Height Requirements

Step 4

Using appropriate length of pipe section(s) attach to fireplace with three (3) screws. Follow with the installation of the inner and outer elbow, again secure joints with three (3) sheet metal screws.

Step 5

Measure the horizontal length requirement including a 2" (51 mm) overlap, i.e. from the elbow to the outside wall face plus 2" (51 mm) (or the distance required if installing a second 90° elbow). *Figure 27*

Always install horizontal venting on a level plane.

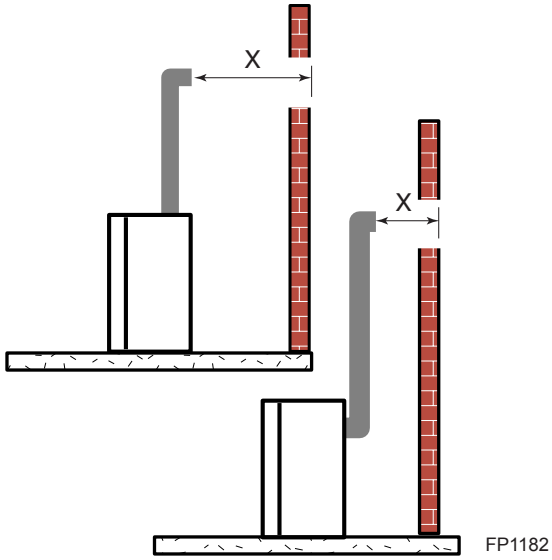


Figure 27 - Horizontal Length Requirement

Step 6

Use appropriate length of pipe sections - telescopic or fixed - and install. The sections which go through the wall are packaged with the starter kit, and can be cut to suit if necessary.

Sealing vent pipe and firestop gaps with high temperature sealant will restrict cold air being drawn in around fireplace.

Step 7

Guide the vent terminations 4” and 7” collard into their respective vent pipes. Double check that the vent pipes overlap the collars by 2” (51 mm). Secure the termination to the wall with screws provided and caulk around the wall plate to weatherproof. As an alternative to screwing the termination directly to the wall, you may also use expanding plugs or an approved exterior construction adhesive. You may also attach the termination with screws through the inner body into the 4” vent pipe, however for this method, you must extend the 4” pipe approximately 6” (152 mm) beyond the outer face of the wall.

Support horizontal pipes every 36” (914 mm) with metal pipe straps.

VERTICAL SIDEWALL INSTALLATION - FLEX VENT PIPE

NOTE: The 40” (1016 mm) flex vent is used for 90° off the top of the unit then out the back wall.
Follow Step 1 and 2 on Page 20.

Step 3

Install the four (4) spacer springs on the 4” flex vent pipe. When installing the spacer springs around the 4” pipe, stretch the spring to approximately 15” (381 mm), wrap the spring around the pipe and interlock the ends of the spacer spring approximately 2” (51 mm). Measure 6¾” (172 mm) from the end of the pipe. Place the next spring 5” (127 mm) from the previously installed spring. Place the next spring 6” (152 mm) from the last spring. Finally place the last spring 12” (305 mm) from the last spring installed. *Figure 28*

Step 4

Install the 4” (102 mm) flex vent pipe to the appliance collar as described on Page 14. Secure the end with the first spring 6¾” (172 mm) from the flex pipe end to the unit.

Step 5

Slide the 7” (178 mm) flex vent pipe over the 4” flex vent pipe and secure the 7” collar as described on Page 14.

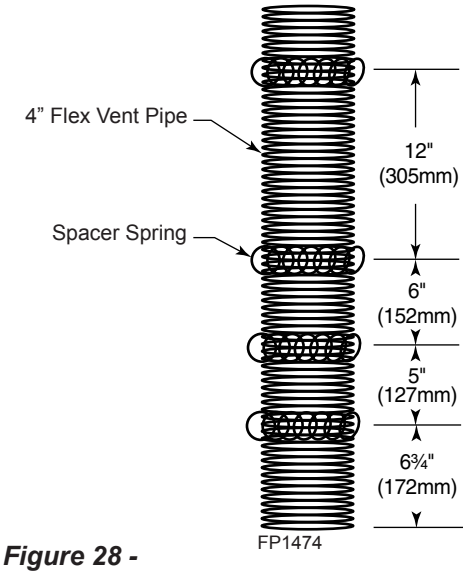


Figure 28 - Install Spacer Springs

Step 6

Bend the flex pipe horizontal so the bottom of the horizontal pipe measure 6½” (165 mm) from the top of the unit immediately after the 90° formation. *Figure 29.* Be sure to follow the 1/2” (13 mm) rise in a 12” (305 mm) horizontal run rule.

Step 7

Install the 4” flex then 7” flex to the termination.

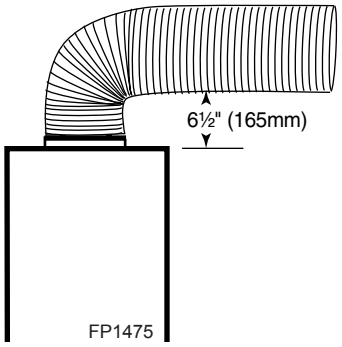


Figure 29 - Bend flex vent at 90° so horizontal portion is 6½” (165 mm) off top of unit

BELOW GRADE INSTALLATION

When it is not possible to meet the required vent terminal clearances of 12” (305 mm) above grade level, a snorkel kit is recommended. It allows installation depth down to 7” (178 mm) below grade level. The 7” (178 mm) is measured from the center of the horizontal vent pipe as it penetrates through the wall.

Ensure the sidewall venting clearances are observed. If venting system is installed below ground, we recommend a window well with adequate and proper drainage to be installed around the termination area.

If installing a snorkel, a minimum 24” (610 mm) vertical rise is necessary. The maximum horizontal run with the 24” vertical pipe is 36” (914 mm). This measurement is taken from the collar of the fireplace (or transition elbow) to the face of the exterior wall. See the Sidewall Venting Graph for extended horizontal run if the vertical exceeds 24” (610 mm).

1. Establish vent hole through the wall. *Page 20, Figure 25*
2. Remove soil to a depth of approximately 16” (406 mm) below base of snorkel. Install drain pipe. Install window well (not supplied). Refill hole with 12” (305 mm) of coarse gravel leaving a clearance of approximately 4” (102 mm) below snorkel. *Figure 30*
3. Install vent system.
4. Ensure a watertight seal is made around the vent pipe coming through the wall.
5. Apply high temperature sealant caulking (supplied) around the 4” and 7” snorkel collars.
6. Slide the snorkel into the vent pipes and secure to the wall.
7. Level the soil so as to maintain a 4” (102 mm) clearance below snorkel. *Figure 30*

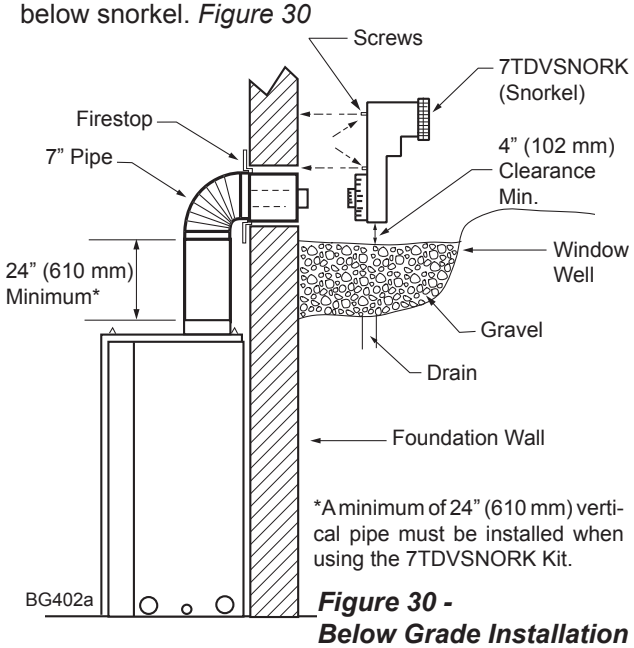


Figure 30 - Below Grade Installation

Do not back fill around snorkel.

A clearance of at least 4” must be maintained between the snorkel and the soil.

If the foundation is recessed, use recess brackets (not supplied) for securing lower portion of the snorkel. Fasten brackets to wall first, then secure to snorkel with self drilling #8 x 1/2 sheet metal screws. It will be necessary to extend vent pipes out as far as the protruding wall face. *Figure 31*

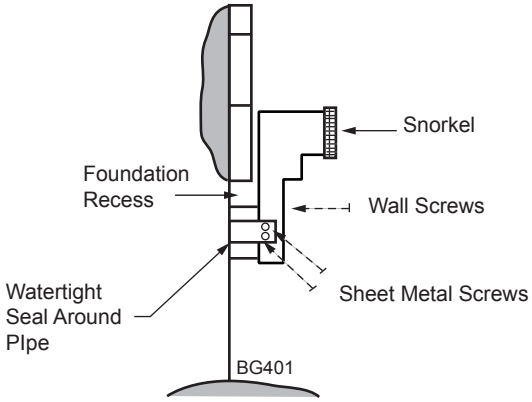


Figure 31 - Snorkel installation, recessed foundation

VERTICAL THROUGH-THE-ROOF APPLICATION

his gas fireplace has been approved for:

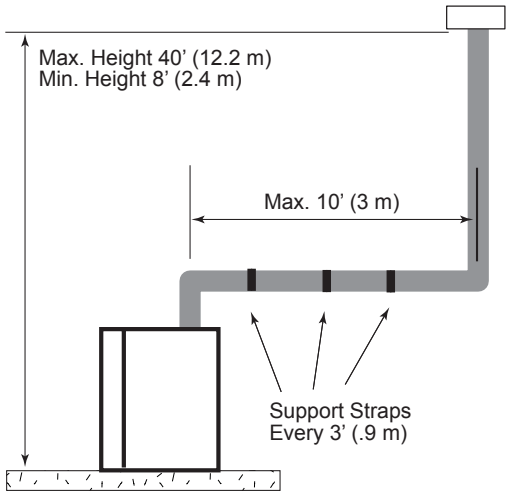
- Vertical installations up to 40’ (12 m) in height. Up to a 10’ (3 m) horizontal vent run can be installed within the vent system using a maximum of two 90° elbows. *Figure 32*
- Up to two 45° elbows may be used within the horizontal run. For each 45° elbow used on the horizontal plane, the maximum horizontal length must be reduced by 18” (450 mm).

Example: Maximum horizontal length:

No elbows = 10’ (3 m)
1 x 45° elbow = 8.5’ (2.6 m)
2 x 45° elbows = 7’ (2.1 m)

- A minimum of an 8’ (2.5 m) vertical rise is required.
- Two sets of 45° elbow offsets may be used within the vertical sections. From 0 to a maximum of 8’ (2.5 m) of vent pipe can be used between elbows. *Figure 32*
- 7DVCS supports offsets. *Figure 35.* This application will require that you first determine the roof pitch and use the appropriate starter kit. (Refer to Venting Components List)
- The maximum angular variation allowed in the system is 270°. *Figure 33*

- For the minimum height of the vent above the highest point of penetration through the roof refer to *Figure 37,* Page 24.



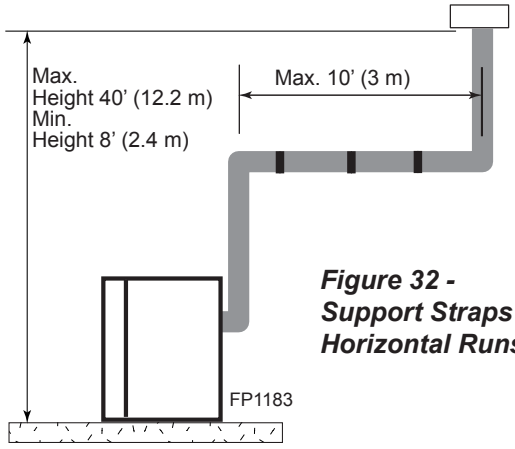


Figure 32 - Support Straps for Horizontal Runs

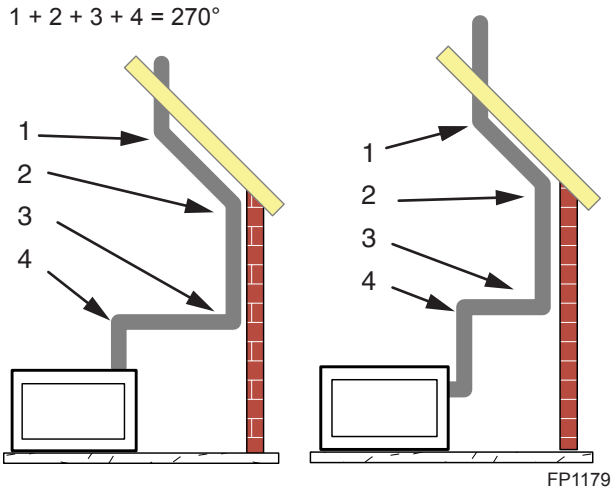


Figure 33 - Maximum Elbow Usage

VERTICAL THROUGH-THE-ROOF INSTALLATION

NOTE: For all top vent vertical through-the-roof installations, install the supplied cross-bar flue restrictor onto the top edge of the firebox flue adapter. *Figure 34*

1. Locate your fireplace.
2. Plumb to center of the (4") flue collar from ceiling above and mark position.
3. Cut opening equal to 9¾" x 9¾" (248 x 248 mm).
4. Proceed to plumb for additional openings through the roof. In all cases, the opening must provide a minimum of 1 inch clearance to the vent pipe, i.e., the hole must be at least 9¾" x 9¾" (248 x 248 mm).
5. Place fireplace into position.
6. Place firestop(s) or Attic Insulation Shield into position and secure. *Figure 35*

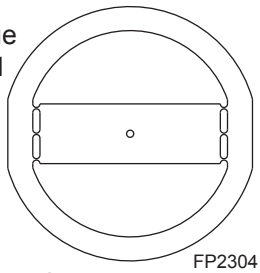


Figure 34 - Vertical Through-the-Roof Restrictor

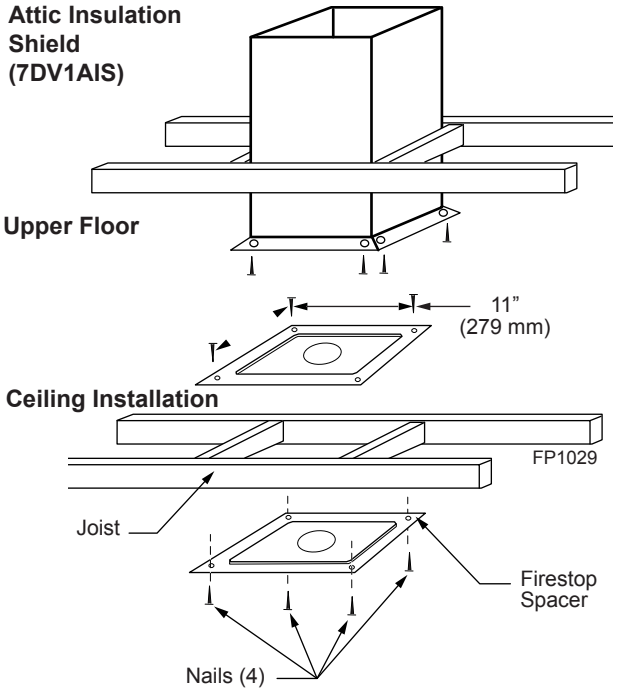
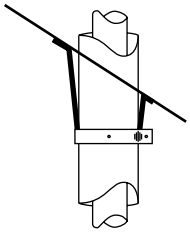


Figure 35 - Place Firestop Spacer(s) and Secure

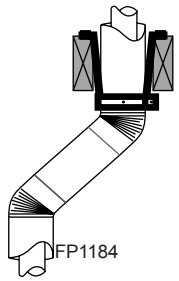
7. Install roof support *(Figure 36)* and roof flashing making sure upper flange is below the shingles. *Figure 38*
8. Install appropriate pipe sections until the venting is above the flashing. *Figure 38*

9. Install storm collar and seal around the pipe.
10. Add additional vent lengths for proper height. *Figure 38*
11. Apply high temperature sealant to 4” and 7” collars of vertical vent termination and install.

If there is a room above ceiling level, fire stop spacer must be installed on both the bottom ad the top side of the ceiling joists. If an attic is above ceiling level an Attic Insulation Shield must be installed. The enlarged ends of the vent section always face downward.



Typical Roof Support Application



Typical Ceiling Support Application

Figure 36 - Venting Supports

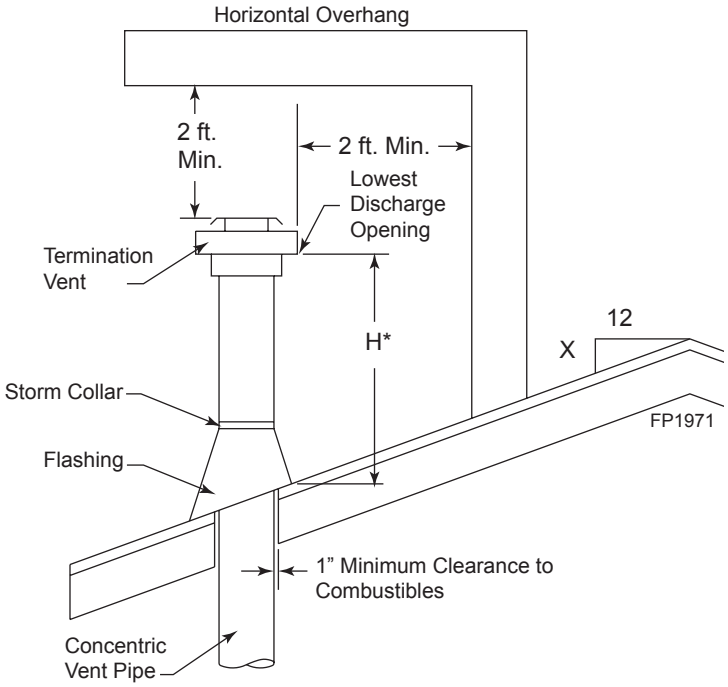


Figure 37 - Minimum Chimney Clearance

Roof Pitch	H (feet)
Flat to 6/12	1.0
Over 6/12 to 7/12	1.25
Over 7/12 to 8/12	1.5
Over 8/12 to 9/12	2.0
Over 9/12 to 10/12	2.5
Over 10/12 to 11/12	3.25
Over 11/12 to 12/12	4.0

*H - Minimum height from roof to lowest discharge opening of vent

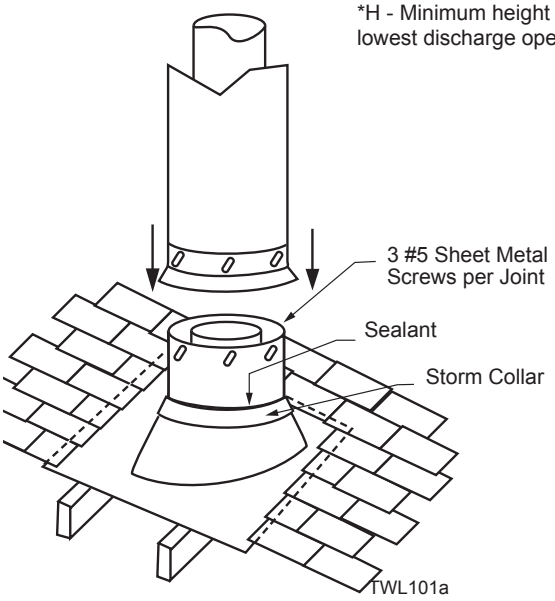


Figure 38 - Roof Flashing

CHECK GAS TYPE

Use proper gas type for the fireplace you are installing. If you have conflicting gas type, do not install fireplace. See dealer where you purchased the fireplace for proper fireplace for your gas type or conversion kit.

INSTALL GAS PIPING TO FIREPLACE / BURNER SYSTEM LOCATION

WARNING

A qualified installer or service person must connect appliance to gas supply. Follow all local codes.

CAUTION

For propane/LP units, never connect fireplace directly to the propane/LP supply. This burner system requires an external regulator (not supplied). Install the external regulator between the burner system and propane/LP supply.

INSTALLATION ITEMS NEEDED

Before installing fireplace and burner system, make sure you have the items listed below.

- External regulator (supplied by installer)
- Piping (check local codes)
- Sealant (resistant to propane/LP gas)
- Equipment shutoff valve*
- Test gauge connection*
- Sediment trap (recommended)
- Tee joint
- Pipe wrench
- approved flexible gas line with gas connector (if allowed by local codes — not provided)

* A CSA design-certified equipment shutoff valve with 1/8" NPT tap is an acceptable alternative to test gauge connection. Purchase the CSA design-certified equipment shutoff valve from your dealer.

For propane/LP connections only, the installer must supply an external regulator. The external regulator will reduce incoming gas pressure. You must reduce incoming gas pressure to between 11 and 13 inches of water. If you do not reduce incoming gas pressure, burner system regulator damage could occur. Install external regulator with the vent pointing down as shown in *Figure 39.* Pointing the vent down protects it from freezing rain or sleet.

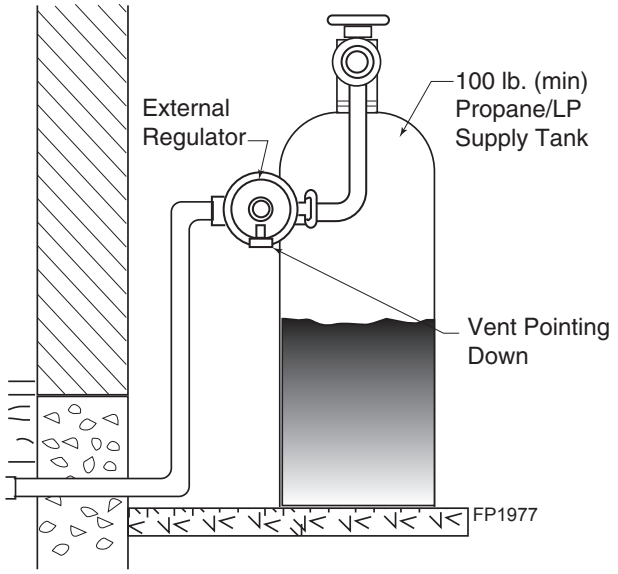


Figure 39 - External Regulator with Vent Pointing Down (Propane/LP Only)

CAUTION

Use only new black iron or steel pipe. Internally tinned copper or copper tubing can be used per National Fuel Code, Section 2.6.3, providing gas meets hydrogen sulfide limits, and where permitted by local codes. Gas piping system must be sized to provide minimum inlet pressure (listed on data plate) at the maximum flow rate (BTU/hr). Undue pressure loss will occur if the pipe is too small.

When using copper of flex connectors use only fittings approved for gas connections. The gas control inlet is 3/8" NPT.

WARNING **Only persons licensed to work with gas piping may make the necessary gas connections to this appliance.**

CAUTION **A manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8" NPT pressure tapping point should be installed upstream of the appliance.** *Figure 38*

NOTE: The gas line connection may be made using 1/2" rigid tubing or an approved flex connector. Since some municipalities have additional local codes it is always best to consult your local authorities and the current edition of the National Fuel Gas Code ANSI.Z223.1, NFPA54. In Canada CSA-B149 (1 or 2) Installation Code.

A listed manual shutoff valve must be installed upstream of the appliance. Union tee and plugged 1/8" NPT pressure tapping point should be installed upstream of the appliance. *Figure 40*

CAUTION **Use pipe joint sealant that is resistant to liquid petroleum (LP) gas.**

IMPORTANT: Install main gas valve (equipment shutoff valve) in an accessible location. The main gas valve is for turning on or shutting off the gas to the fireplace.

Check your building codes for any special requirements for locating equipment shutoff valve to fireplaces.

Apply pipe joint sealant lightly to male threads. This will prevent excess sealant from going into pipe. Excess sealant in pipe could result in clogged burner system valve.

We recommend that you install a sediment trap/drip leg in supply line as shown in *Figure 40*. Locate sediment trap/drip leg where it is within reach for cleaning. Install in piping system between fuel supply and burner system. Locate sediment trap/drip leg where trapped matter is not likely to freeze. A sediment trap collects moisture and contaminants and keeps them from going into the burner system gas controls. If sediment trap/drip leg is not installed or is installed wrong, burner system may not run properly.

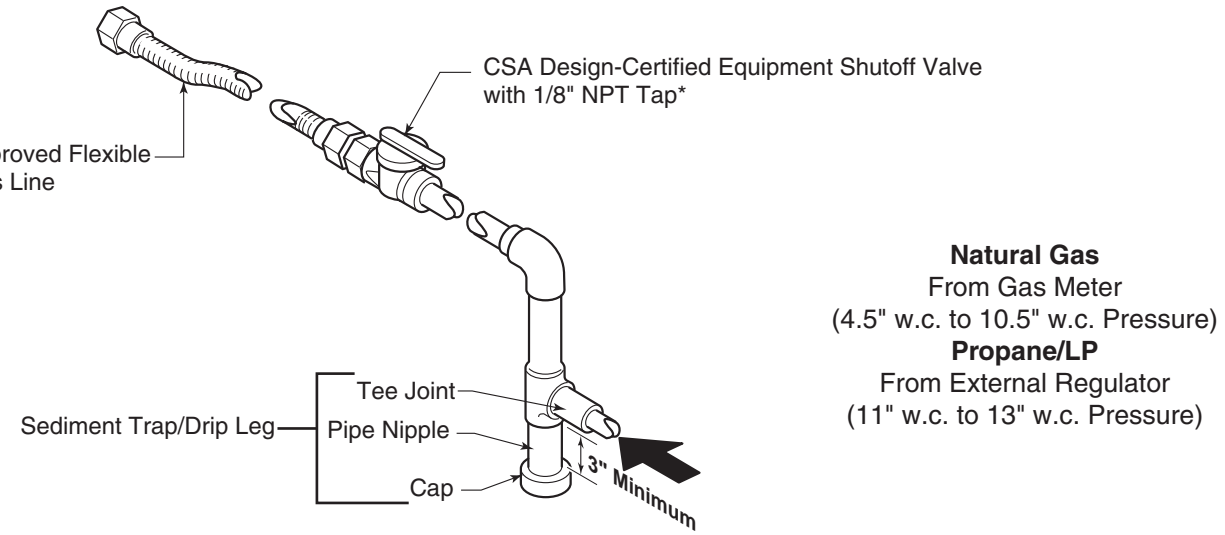


Figure 40 - Gas Connection

1. Check gas type. The gas supply must be the same as stated on the appliance's rating decal. If the gas supply is different from the fireplace, **STOP!** Do not install the appliance. Contact your dealer immediately.
2. To ease installation, a 30" (mm) flex line with manual shut-off valve has been provided with this appliance. Install and attach 1/2" gas line onto shut-off valve.
3. After completing gas line connection, purge air from gas line and test all gas joints from the gas meter to the fireplace for leaks. Use a solution of 50/50 water and soap or a gas sniffer.
4. To adjust flame height, turn HI/LO knob to HI to get maximum pressure to burner. Turn HI/LO knob to LO to get minimum pressure.
5. To check gas pressures at valve, turn captured screw counter clockwise 2 or 3 turns and then place tubing to pressure gauge over test point. Turn unit to high. *Figure 41.* After taking pressure reading, be sure and turn captured screw clockwise firmly to reseal. Do not over torque. Check test points for gas leaks.

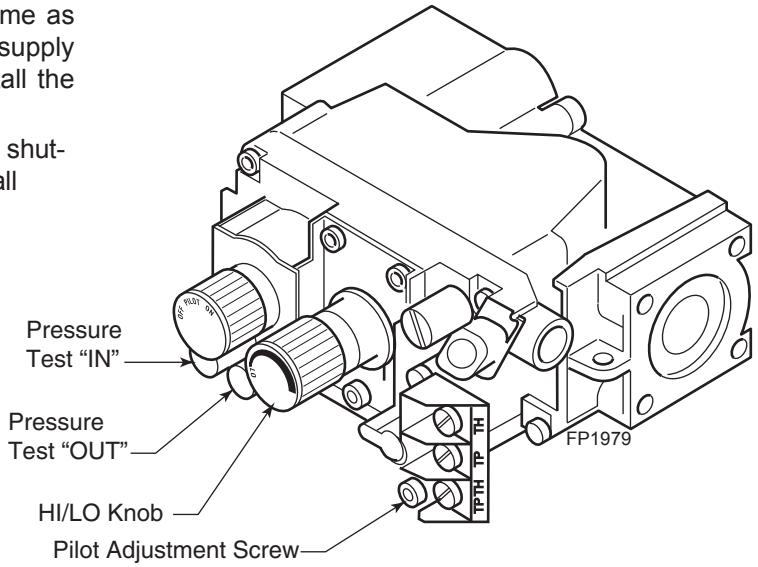


Figure 41 -
Gas Pressure Check at Gas Valve

WARNING

Do not use open flame to check for gas leaks.

ELECTRICAL WIRING

This fireplace will work without any electrical supply. Electricity is only needed to operate blower.

NOTE: If installed in mobile home, fireplace must be bolted securely to floor*.*

WARNING

Electrical connections should only be performed by a qualified, licensed electrician. Main power must be off when connecting to main electrical power supply or performing service. All wiring shall be in compliance with all local, city and state codes. The appliance, when installed, must be electrically grounded in accordance with local codes or in the absence of local codes, with the National Electrical Code ANSI/NFPA 70 (latest edition) and Canadian Electrical Code, CSA C22.1.

CAUTION

Label all wires before disconnecting when servicing controls. Wiring errors can cause improper and dangerous operation.

Verify proper operation after servicing.

REMOTE WALL MOUNTED SWITCH

A remote wall switch and up to fifteen (15) feet of 18 Ga. wire may be used with this appliance. Attach the wall switch in a junction box at the desired location on the wall. *Figure 40*. Do not extend beyond the wall switch wire length provided.

WARNING **Do not connect wall switch to (110 V) circuit.**

NOTE: Extended lengths of wire may cause the fireplace not to function properly. Longer length of wire is permitted if the wire is made out of larger gauge (diameter) wire. Always check with local code.

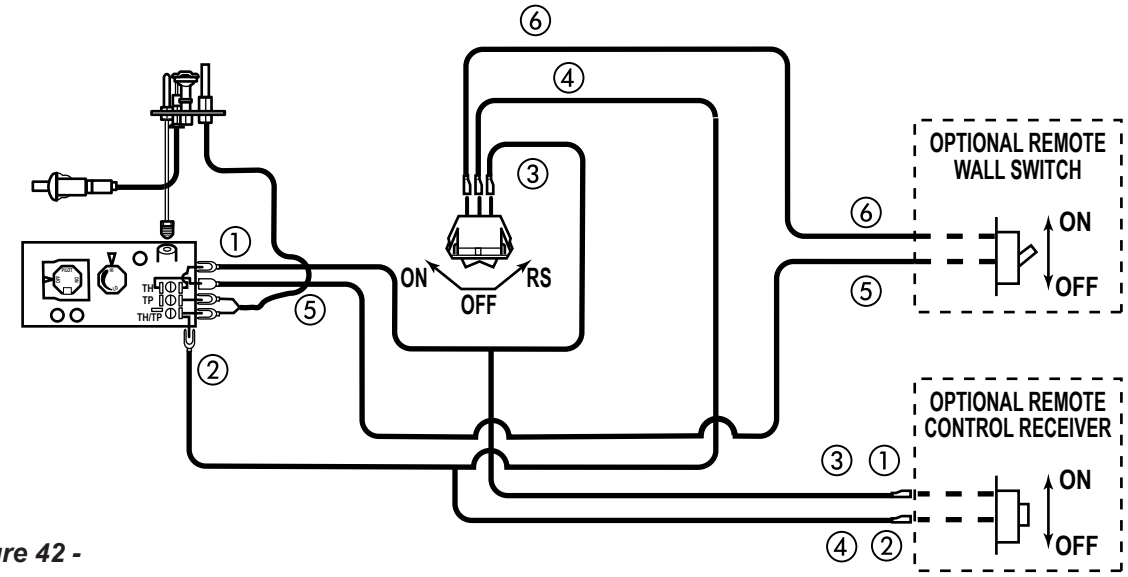


Figure 42 -
Wiring Diagram for Wall Switch

REMOTE WALL SWITCH

Position the wall switch. Do not extend beyond the 15 feet of wire.

OPTIONAL DC REMOTE SYSTEMS

See section entitled *Hearth Mount* in the Millivolt hand held remote instructions supplied with the remote.

1. Using a flat head screw driver, bend the “remote” tabs up from the bottom of the fireplace. *Figure 43*
2. Follow the instructions on remote control to snap the remote cover plate to the remote receiver
3. Connect the wire terminal from the remote receiver. *Figure 42*
4. Use the screws that came with the remote control to mount the remote receiver cover to the bent up “remote” tabs. *Figure 43*

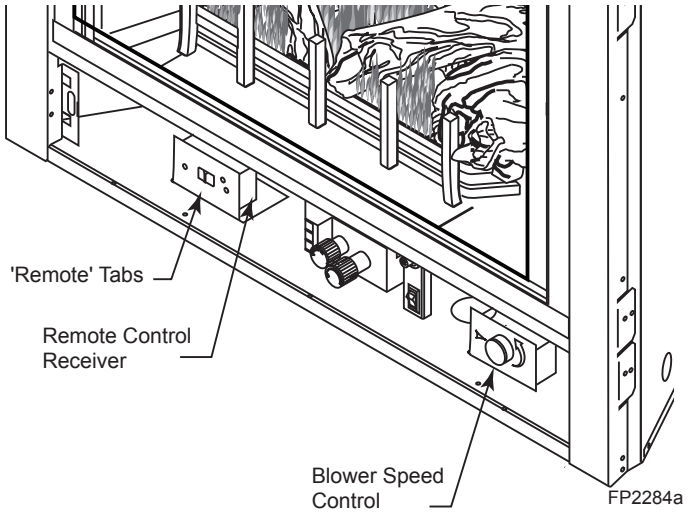


Figure 43 -
Optional Control Location

ELECTRONIC PILOT IGNITION WIRING

WARNING

Do not connect 110-120 VAC to the Remote Wall Switch. The appliance will malfunction.

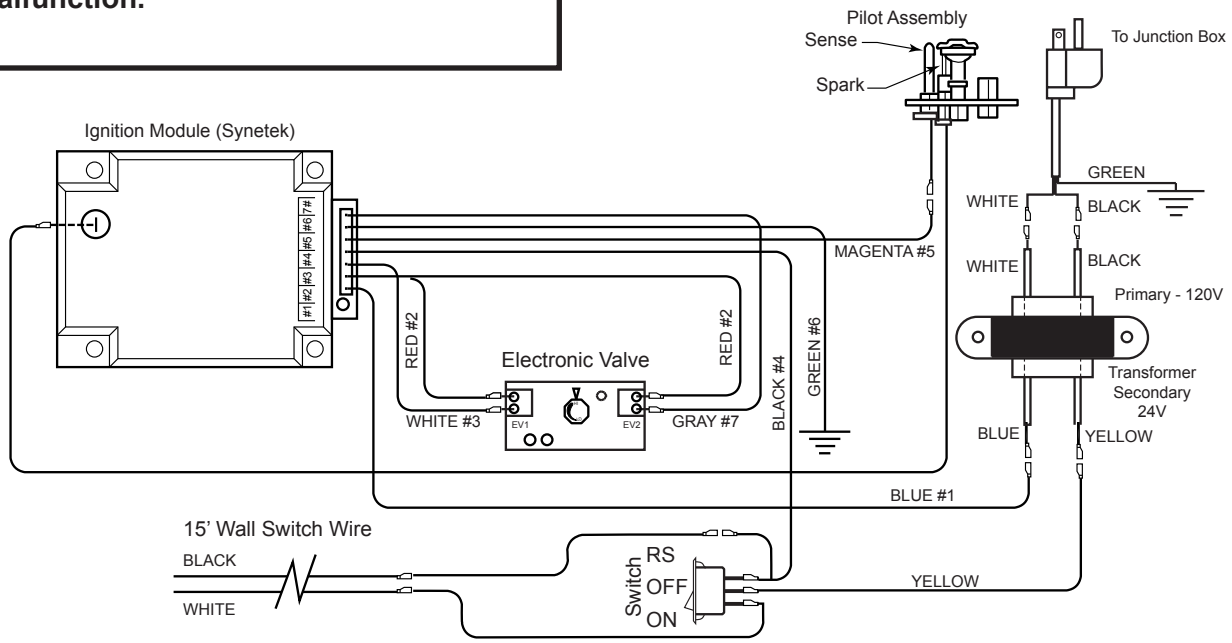


Figure 44 -
Remote Wall Switch Wiring Diagram

OPTIONAL FAN/BLOWER SYSTEMS

The junction box for the fan/blower systems has been factory installed. This system requires that 110-120 VAC to be wired to the factory installed junction box before the fireplace is permanently installed. *Figure 45*

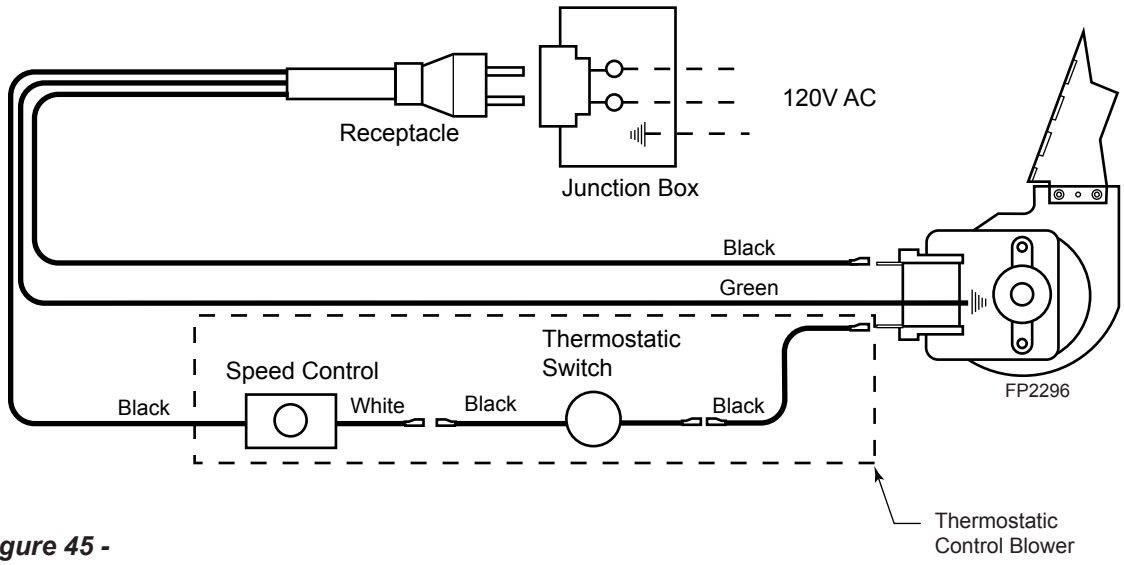


Figure 45 -
Blower Wiring Diagram

GLASS FRAME REMOVAL

1. Remove upper and lower louvers.
2. Release the clamps on the bottom of the fireplace. *Figure 46*
3. Tilt glass frame out and lift glass frame up until it clears the hook on top of the frame.
4. Set glass frame aside.

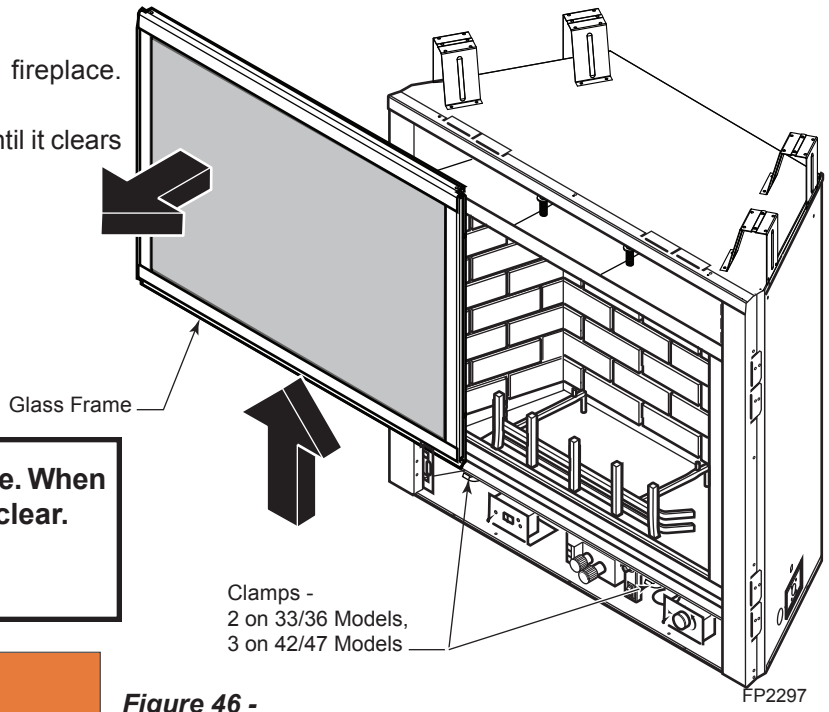


Figure 46 - Removing Glass Frame - CDVR Series Shown

CAUTION

Each clamp has a quick spring force. When reinstalling clamps, keep fingers clear.

⚠ WARNING

HOT GLASS WILL CAUSE BURNS.

DO NOT TOUCH GLASS UNTIL COOLED.

NEVER ALLOW CHILDREN TO TOUCH GLASS.

ROCK WOOL PLACEMENT

1. Place rock wool on burner to provide glowing embers. For best results, pull the rock wool apart into pieces the size of a dime or smaller. NOTE: Embers must be loosely placed to allow proper burner flame.
2. Distribute one layer of rock wool to cover the entire burner. *Figure 47*
3. Place the logs on the burner. See *Log Placement* below. Light unit and after 15 minutes, check burner flame and glow. Refer to *Burner Flame*, Page 36.

If the flame is blue and only in the center, turn off unit and let cool. After unit cools, remove logs. If the back holes are clear, add more rock wool to the center of the burner. Replace logs and check flame again. Save left over rock wool to refresh when cleaning later. Too much rock wool can disturb the flame and cause sooting on the glass or logs.

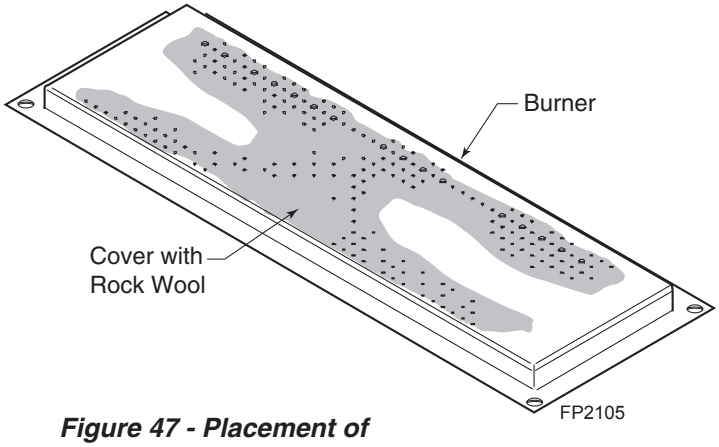


Figure 47 - Placement of Rock Wool on Burner

WARNING

Do not use the entire bag of rock wool to cover the burner. This could cause the flame to burn poorly and may lead to sooting.

LOG PLACEMENT

Figure 48

1. Place rear log (#1) on grate assembly. Log should rest firmly on the two log mounting pins shown.
2. Place top right log (#2) on the rear log. Rest the right back side of the log in the flat area of the rear log. Place the narrow front end of the log next to the center vertical grate bar.
3. Place the top left log (#3) on the rear log. Nest the forked end of the top left log into the fork or the rear log. Rest the narrow end of the top left log behind the center vertical grate bar.

LAVA ROCK AND EMBER PLACEMENT

Sprinkle lava rock on the floor of the inner combustion chamber. Evenly distribute the rock. Do not pile the lava rock up in front of grate. Do not place lava rock on the burner. If desired, purchase optional embers to decorate the floor of the fireplace.

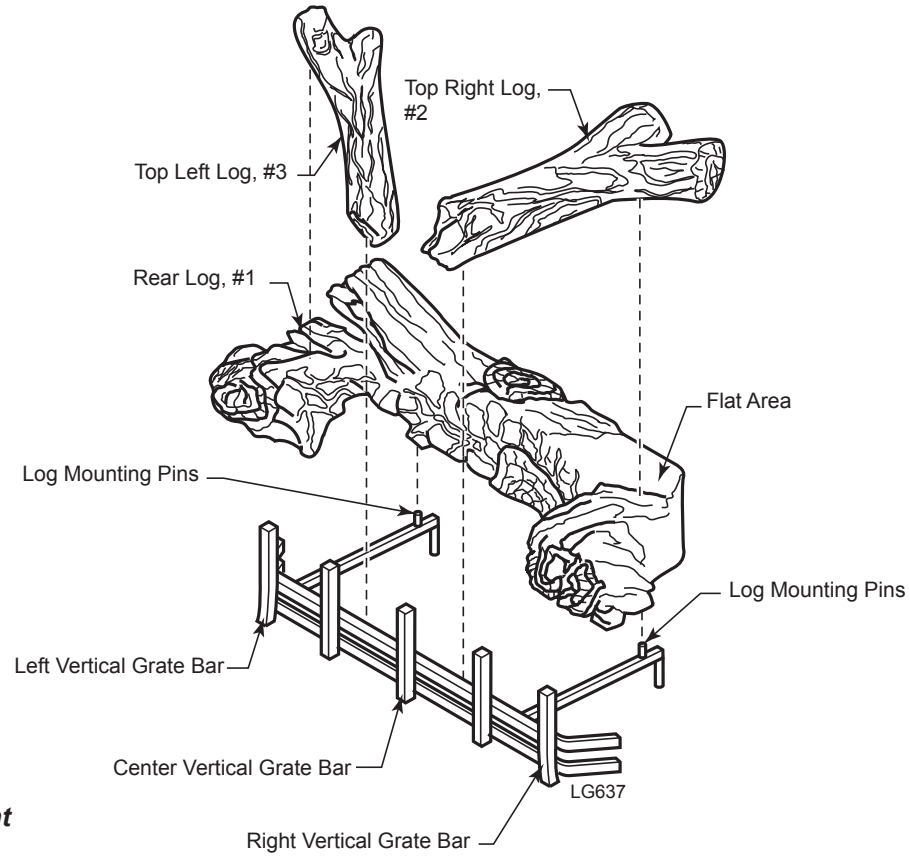


Figure 48 - Log Placement

WARNING

Do not sprinkle the lava rock or ember chunks on top of the burner. This may cause potential sooting, glass breakage and a fire hazard

FOR YOUR SAFETY READ BEFORE LIGHTING

WARNING

If you do not follow these instruction exactly, a fire or explosion may result causing property damage, personal injury or loss of life.

A. This appliance is equipped with a pilot which must be lit with built-in piezo ignitor while following these instructions exactly.

B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WHAT TO DO IF YOU SMELL GAS:

- Turn off all gas to the appliance.
- Open windows.
- Do not attempt to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

C. Use only your hand to push in, or turn the gas control knob. Never use tools. If the knob will not push in or turn by hand, don't try to repair it. Call a qualified service technician. Force or attempted repair may result in a fire or explosion.

D. Do not use this appliance if any part of it has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

LIGHTING PILOT FOR THE FIRST TIME

INITIAL LIGHTING

Purge air from the supply line as follows:

- Open main shutoff valve.
- Unscrew main pressure test point.
- Leave inlet test screw open until gas comes in.
- When gas is flowing, tighten inlet screw immediately.

WARNING

Never use an open flame to check for gas leak.

LEAK TESTING

1. Follow the pipe from the gas supply line connection to the gas valve. Check connection for leaks with soap and water mixture.
2. Next check for gas leaks at the burner with soap and water mixture.
3. Check the pilot for gas leaks with soap and water mixture.

LIGHTING PILOT FOR THE FIRST TIME

APPROVED LEAK TESTING METHOD

You may check for gas leaks with the following methods only:

- Soap and water solution
- An approved leak testing spray
- Electronic sniffer

WARNING

If using a soap and water solution to test for leaks, DO NOT spray solution onto control body.

NOTE: Remove any excessive pipe compound from the connections. Excessive pipe compound can set off electronic sniffers.

DANGER

Never check for gas leak with open flame!

Check for gas leaks in each of the following locations:

- Pipe from the gas supply line connection to the gas valve
- Burner connections
- Pilot
- Each joint or connection
- Field made joints / gas shutoff valve
- Factory made joints
- All joints on valve and control body

LIGHTING PILOT

WARNING

The control has an interlock device that does not allow the lighting of the fireplace up to the moment the safety device of the flame has not interrupted the gas flow. After that period of time (when the magnet is closed), it is possible to start the lighting operation.

The gas control knob is designed to be operated by hand. DO NOT use any tools during this operation. Damaged knobs may result in serious injury.

1. Depress and turn knob counterclockwise ↶ to pilot position.
2. Depress fully and hold pilot gas knob. Depress piezo igniter as many times as needed to ignite pilot. Keep knob fully depressed for a few seconds. Release and check that pilot continues to burn.

If the pilot does not stay lit, repeat steps 1 and 2.

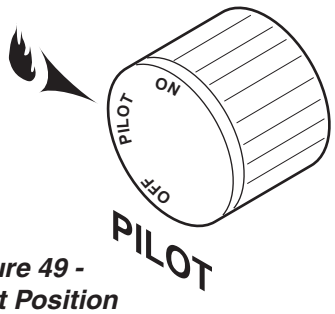


Figure 49 - Pilot Position

Continued on next page

LIGHTING BURNER

MAIN BURNER SWITCH

The “ON/OFF/RS” switch for the main burner can be found behind door of the fireplace. This switch allows you to turn on and to turn off the main burner without using the gas valve knob. Make sure the button is in the “ON” position to light the main burner. *Figure 50*

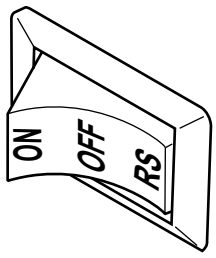


Figure 50 - On/Off/RS Switch

LIGHTING THE BURNER

Depress and turn the knob counterclockwise ↶ to the “ON” position. *Figure 51.* It will take less than four (4) seconds for the burner to ignite.

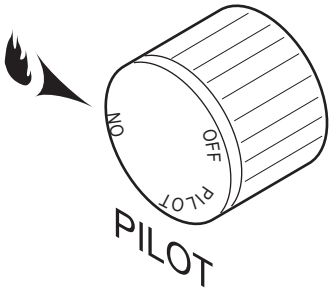


Figure 51 - On Position

PILOT POSITION

Depress and turn knob to pilot position to keep burner off while maintaining the pilot light. *Figure 52*

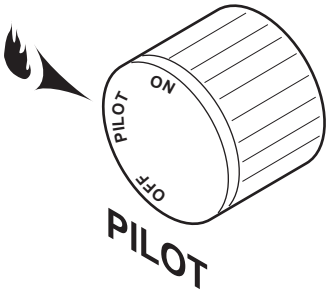


Figure 52 - Pilot Position

TO TURN OFF GAS

Depress and turn knob clockwise ↷ to “OFF” position. *Figure 53*

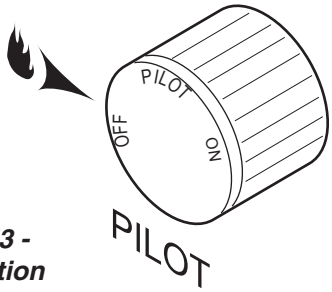


Figure 53 - Off Position

FOR YOUR SAFETY READ BEFORE LIGHTING

A. This appliance is equipped with an ignition device (Piezo) which automatically lights the pilot. Do NOT try to light the burner by hand.

B. BEFORE OPERATING smell all around the appliance area for gas. Be sure to smell next to the floor because some gas is heavier than air and will settle on the floor.

WARNING **If you do not follow these instructions exactly, a fire or explosion may result causing property damage, personal injury or loss of life.**

WHAT TO DO IF YOU SMELL GAS:

- Turn off all gas to the appliance.
- Open windows.
- Do not attempt to light any appliance.
- Do not touch any electric switch; do not use any phone in your building.
- Immediately call your gas supplier from a neighbor's phone. Follow the gas supplier's instructions.
- If you cannot reach your gas supplier, call the fire department.

WARNING

Never use an open flame to check for gas leak.

C. Turn off all electric power to appliance.

D. Do not use this appliance if any part of it has been under water. Immediately call a qualified service technician to inspect the appliance and to replace any part of the control system and any gas control that has been under water.

LIGHTING ELECTRONIC IGNITION

1. **STOP!** Read the safety information above.
2. Make sure all power to unit is turned off.
3. Set thermostat to lowest setting.
4. This appliance is equipped with an ignition device which automatically lights the burner. Do not try to light the burner by hand.
5. Turn on all electric power to appliance.
6. Set thermostat to desired setting.
7. Turn RS-OFF-ON rocker switch to “ON”.
8. If the appliance will not operate, follow the instruction *To Turn Off Gas* below and call your service technician or gas supplier.

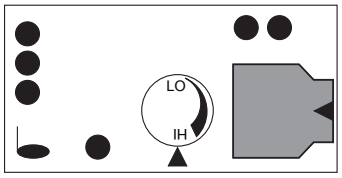


Figure 54 - Electronic Gas Valve

TO TURN OFF GAS

1. Open lower door.
2. Turn RS-OFF_ON rocker switch to “OFF”.
3. Turn off all electric power to the appliance if service is to be performed.
4. Close lower door.

WARNING **Turn off gas before servicing fireplace. It is recommended that a qualified service technician perform these check-ups at the beginning of each heating season.**

BURNER, PILOT AND CONTROL COMPARTMENT

Keep the control compartment, logs, and burner areas surrounding the logs clean by vacuuming or brushing at least twice a year. Make sure the burner porting, pilot air opening and burner air opening are free of obstructions at all times.

PILOT FLAME

The flames from the pilot should be visually checked as soon as the heater is installed and periodically during normal operation. **The pilot flame must always be present when the fireplace is in operation.** *Figure 55.* The pilot flame has three distinct flames, one engulfing the thermopile, one engulfing the thermocouple, and the other reaching to the main burner.

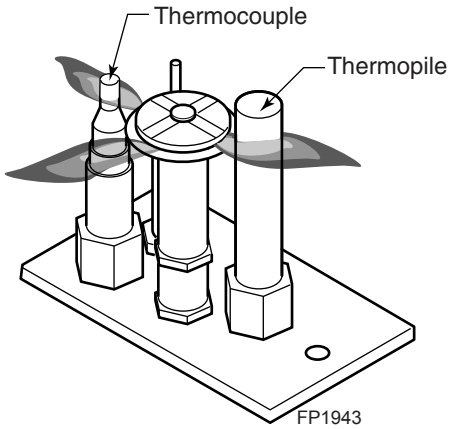


Figure 55 - Pilot Flame

BURNER

Inspect area around the injector. Remove any lint or foreign material with a brush or vacuum.

BURNER FLAME

The flames from the burner should be visually checked as soon as the heater is installed and periodically during normal operation. In normal operation, at full rate, and after operating for about 15 to 30 minutes, the flame should be yellow and slightly taller than the rear log. *Figure 56*

If the flame is blue and only in the center, turn off unit and let cool. After unit is cool, remove logs and check to make sure rock wool is placed correctly. Replace logs.

NOTE: The type of installation, vent system configuration, and wind effects may cause the flame patterns to vary.

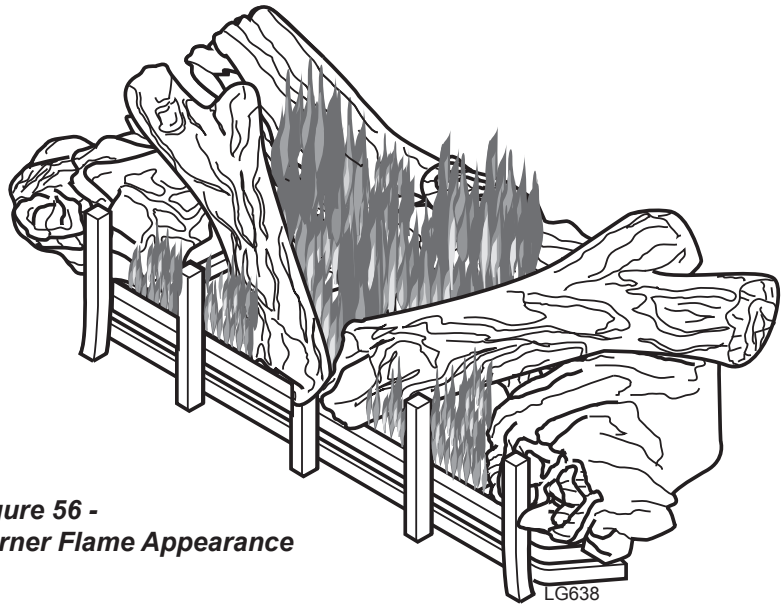


Figure 56 - Burner Flame Appearance

VENT SYSTEM

The fireplace and venting system should be inspected before initial use and at least annually by a qualified field service person. Inspect the external vent cap on a regular basis to make sure that no debris is interfering with the airflow. Inspect entire venting system to ensure proper function.

GLASS DOOR

Thoroughly clean the inside of the glass door after using the fireplace for ten hours. Periodically clean the glass door as necessary.

When cleaning the glass, remember:

- **Do not remove the glass when hot.** Allow glass to cool before removal.
- NEVER use abrasive materials.
- Keep children and pets a safe distance away.
- Never operate the fireplace without the glass door properly secured.
- Never operate the fireplace if the glass is broken.
- Replace any glass that is chipped, cracked, or broken. Replacement glass door assemblies MUST be supplied by the fireplace manufacturer – **No substitute materials may be used.**
- Handle glass door with care to avoid striking or scratching it on hard objects.

To clean glass door, follow “Glass Removal” procedure outlined in the *Final Installation* section. Film deposit on the inside of the glass should be cleaned off using a nontoxic, non-corrosive, non-abrasive, mild-cleaning solution. Simply apply an adequate amount to the glass and wipe off with a damp cloth. After all maintenance has been completed, re-install glass door.

LOGS

Leave logs installed in the fireplace for cleaning. Vacuum surface of the logs with a brush attachment. If logs must be removed for cleaning, handle carefully by holding gently at each end. Gloves are recommended to prevent skin irritation from ceramic fibers. If skin becomes irritated, wash gently with soap and water. Vacuum surface of logs with brush attachment or brush logs with a soft bristle brush (i.e. clean, dry paintbrush). To place logs back in the fireplace, Refer to “Log Placement” section in this manual.

NOTE: **Do not use fluids to clean ceramic fiber logs.**

ROCK WOOL

Replace or add rock wool as required following installation instructions in the *Final Installation* section of this manual.

STANDING PILOT IGNITION

SYMPTOM	POSSIBLE CAUSE	ACTION
1. Spark ignitor will not light pilot after repeated triggering of piezo.	A. Wire disconnected.	A. Open door and check to make sure wire is connected to ignitor.
	B. Defective ignitor.	B. Check for spark at electrode and pilot. If no spark and electrode wire is properly connected, replace pilot assembly.
	C. No gas or low gas pressure.	C. Check remote/manual shut off valve from fireplace. Low pressure can be caused by bent lines, restricted lines, low pressure line pressure. Consult with plumber or gas supplier.
	D. No Propane/LPG in tank	D. Check Propane/LPG tank. Refill tank.
2. Pilot will not stay lit after carefully following lighting instructions.	A. Defective thermocouple	A. Check that thermocouple flame impinges on thermocouple. Clean and/or adjust pilot for maximum flame impingement. Ensure that the thermocouple connection at the gas valve is fully inserted and tight. Disconnect the thermocouple from the valve, place one millivolt lead wire on the tip of the thermocouple and the other meter lead wire on the thermocouple copper lead. Start the pilot and hold the valve knob in. If the millivolt reading is less than 15 mV, replace pilot assembly.
	B. Defective valve	B. If thermocouple is producing more than 15 mV, replace faulty valve.
3. Pilot burning, valve knob turned to “ON”, switch is turned to “ON” or “RS”, but burner will not ignite.	A. Defective switch, wall switch, remote control or wire	A. Check switch and wire for proper connection. Place jumper wires across terminals of switch. If burner comes on, replace defective switch.If the switch is OK, repeat the same procedure on remote control If burner comes on, replace remote control. Place jumper wire across wire at gas valves (terminals marked TH and TP/TH). If burner comes on, wires are faulty or connections are bad. Replace wire.
	B. Pilot flame too small	B. If pilot flame is not close enough to the thermopile, adjust pilot flame.
	C. Defective or malfunctioning thermopile	C. Check thermopile wire connections to make sure all are tight and that the thermopile is fully inserted into pilot assembly. Check thermopile with a millivolt meter. Connect leads to TP and TP/TH terminals on the control valve. If meter reading is below 325 mV, replace pilot assembly.
	D. Defective valve	D. Turn valve knob to “On” and switch to “ON.” Take a reading at the thermopile leads (TP & TP/TH) on the valve. If the meter reads greater than 175 mV and the burner does not light, replace defective valve.

STANDING PILOT IGNITION

SYMPTOM	POSSIBLE CAUSE	ACTION
4. Frequent pilot outage problem.	A. Pilot flame may be too high or too low, causing pilot safety to drop out	A. Clean and adjust the pilot flame for maximum flame impingement on thermocouple.
5. The pilot and main burner extinguish while in operation	A. Inner vent pipe leaking exhaust gases back into system	A. Check for flue product leak. Replace defective pipe section.
	B. Horizontal vent improperly pitched	B. Check horizontal-venting piping is running upward 1/4" per foot. Do not run the pipe level or downward.
	C. Improper vent cap installation	C. Check for proper installation and freedom from debris or blockage.
6. Glass Soots	A. Flame impingement on logs	A. Install log set per the instructions Inspect the injector and air intake area. Make sure this area does not have any blockage from debris and clean. Check gas supply.
7. Flame burns blue and lifts off burner (ghosting)	A. Insufficient fresh air being supplied	A. Ensure that the vent cap is installed properly and free of debris. Ensure that the vent system joints are tight and have no leaks. Ensure that no debris has been blocking the inner air intake at the bottom back of the combustion chamber. Ensure that the glass is properly secure and latch.

ELECTRONIC IGNITION

START

1. Turn gas supply off.
2. Turn ON/OFF switch to "ON"
   Power to module (24V Normal)

NO → Check: Line voltage (120VAC)
Low voltage transformer (19.5 minimum VAC)
ON/OFF switch
Wiring connections

YES

Is there a spark across ignitor sensor gap?

NO → Unplug ignition lead and check spark at module (24VAC normal).

Is spark OK?

NO → Replace module

YES

YES

A. Check ignition cable ground wiring, ceramic insulator and gap. *Correct if necessary.*
B. Does ignition cable show signs of melting or buckling? *Take protective action to shield cable and boot from excessive temperatures.*

Turn on gas.
Does pilot burner light?

NO →
A. Are all manual gas valves open?
Are supply tubing and pressure good?
Are pilot burner orifices blocked?
B. Check electrical connections between module and pilot operator on gas control.
C. Check for 24VAC across PV-MVPV terminals.
If voltage is correct, replace gas control.
If voltage is not correct, replace module.

YES

Does spark stop when pilot is lit?

NO →
NOTE: If module goes into lockout, reset system.
A. Check continuity of ignition cable and ground wire.
B. Clean flame rod.
C. Check electrical connections between flame rod and module.
D. Is ceramic flame rod insulator cracked?
E. Is pilot flame a steady blue? Does flame cover flame rod?
If not, adjust pilot flame. Replace module if problem persists.

YES

Does main burner light?

NO →
A. Check for 24VAC across MV-MVPV terminal.
Replace module if there is no voltage.
B. Are electrical connections between module and gas control good?
If connections are good, replace gas control or gas control operator.

YES

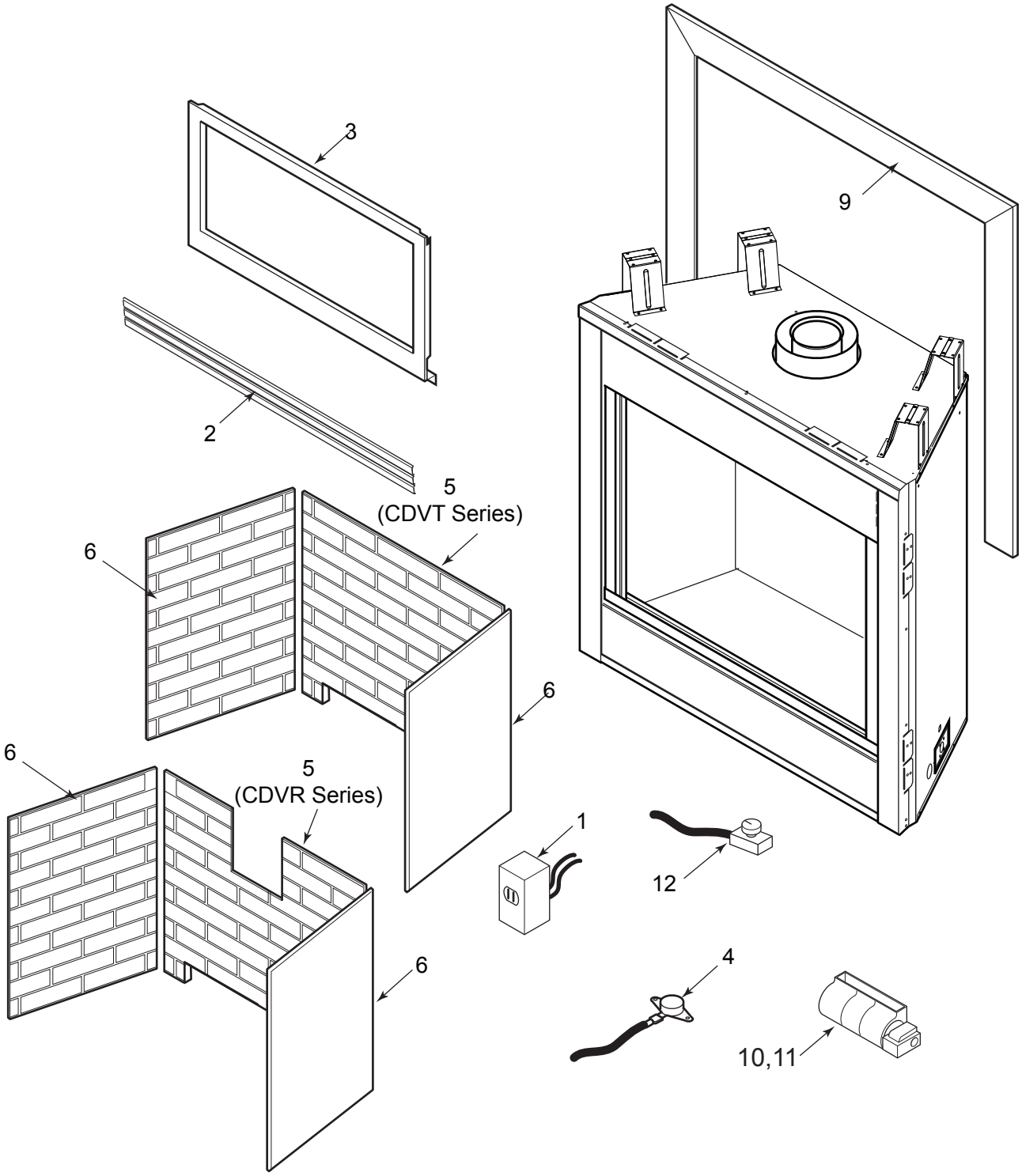
Does system run until ON/OFF switch is in "OFF" position?

NO →
NOTE: If module goes into lockout, reset system.
A. Check continuity of ignition cable and ground wire.
NOTE: If ground is poor or erratic, shutdown may occasionally occur even though operation is normal at time of checkout.
B. Is pilot flame a steady blue? Does flame cover flame rod?
If above checks out, replace module.

YES

END OF TROUBLESHOOTING

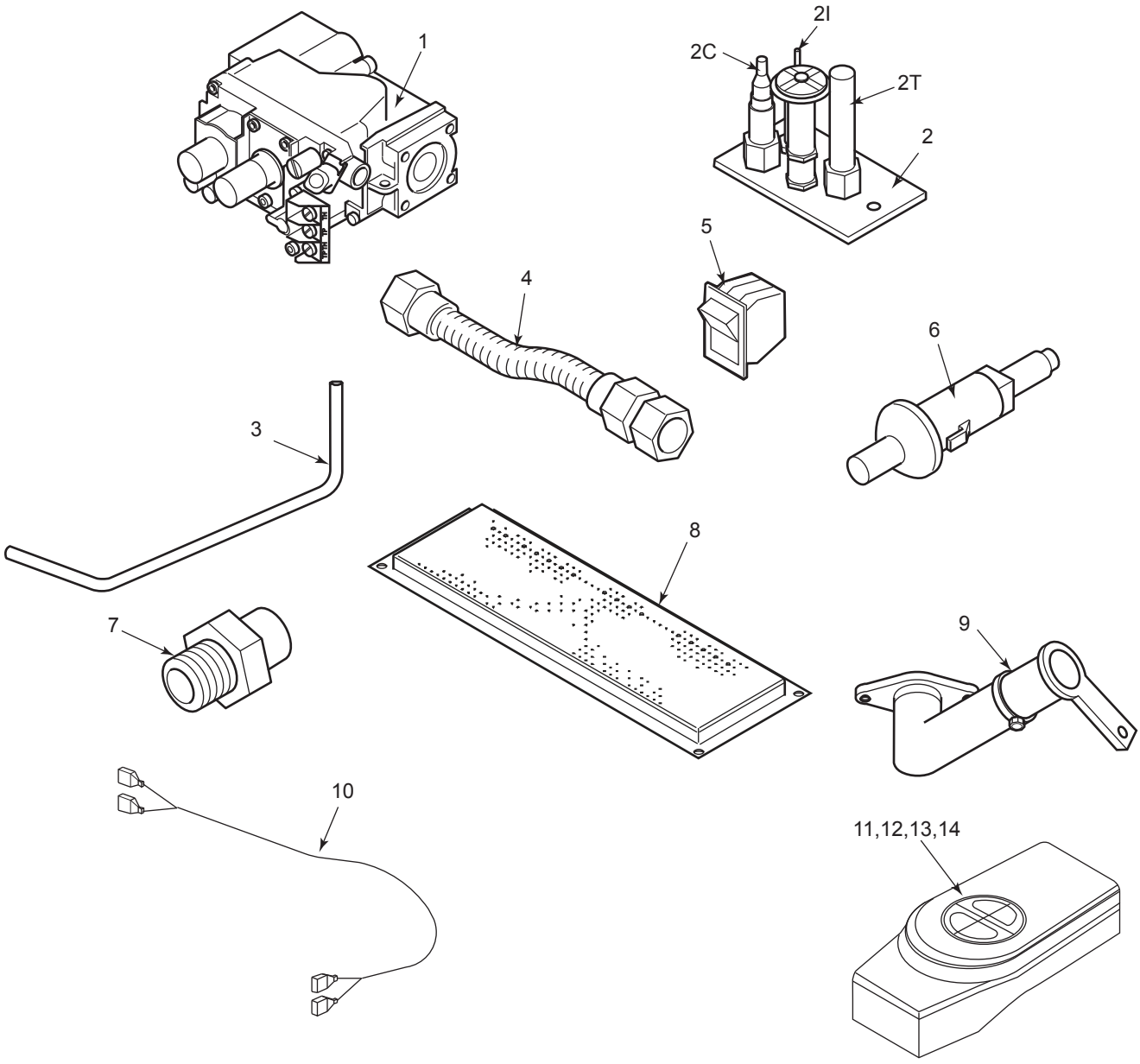
FIREBOX COMPONENTS



FIREBOX COMPONENTS

Item	Description	Qty.	CDVR33	CDVR33	CDVR36	CDVT36	CDVR42	CDVT42	CDVR47	CDVT47
Standard Features										
1.	Junction Box Assy	1	26D2128K	26D2128K	26D2128K	26D2128K	26D2128K	26D2128K	26D2128K	26D2128K
2.	Black Louver	6	54D0246	54D0246	26D0695	26D0695	26D0697	26D0697	26D0699	26D0699
3.	Glass Frame Assy	1	69D0238	69D0238	69D0028	69D0028	69D1107	69D1107	69D2105	69D2105
Factory Installed Service Parts										
2.	Brass Louver	6	54D0249K	54D0249K	26D0701K	26D0701K	26D0703K	26D0703K	26D0705K	26D0705K
4.	Thermostat Sensor for Blower	1	26D2870	26D2870	26D2870	26D2870	26D2870	26D2870	26D2870	26D2870
5.	Firebrick Rear - Cottage Clay	1	69D0221	26D7069	69D0040	69D0041	69D1023	69D1022	69D2019	69D2020
5.	Firebrick Rear - Tavern Brown	1	69D0222	54D0284	69D0044	69D0045	69D1025	69D1024	69D2021	69D2022
6.	Firebrick Right / Left - Cottage Clay	2	26D7068	26D7068	69D0042	69D0042	69D0042	69D0042	69D0042	69D0042
6.	Firebrick Right / Left - Tavern Brown	2	54D0285	54D0285	69D0046	69D0046	69D0046	69D0046	69D0046	69D0046
7.	Blower Motor (not shown)	1	26D0748	26D0748	26D0748	26D0748	26D0748	26D0748	26D0748	26D0748
Accessories/Field Installed Options										
2.	Brass Louver	1	L30BR	L30BR	L32BR	L32BR	L36BR	L36BR	L42BR	L42BR
2.	Pewter Louver	1	L30PW	L30PW	L32PW	L32PW	L36PW	L36PW	L42PW	L42PW
9.	Curved Design - Brass Trim	1	BRTK30C	BRTC30C	BRTK32C	BRTK32C	BRTK36C	BRTK36C	BRTK42C	BRTK42C
9.	Curved Design - Pewter Trim	1	PWTK30C	PWTK30C	PWTK32C	PWTK32C	PWTK36C	PWTK36C	PWTK36C	PWTK36C
10.	T-stat Blower w/ Speed Control	1	BLOT	BLOT	BLOT	BLOT	BLOT	BLOT	BLOT	BLOT
11.	Manual Blower	1	FK12	FK12	FK12	FK12	FK12	FK12	FK12	FK12
12.	Speed Control	1	26D0746	26D0746	26D0746	26D0746	26D0746	26D0746	26D0746	26D0746

STANDING PILOT — MILLIVOLT CONTROL



STANDING PILOT – MILLIVOLT CONTROL

Item	Description	Qty.	CDV33NV7	CDV33PV7	CDV36NV7	CDV36PV7	CDV42NV7	CDV42PV7	CDV47NV7	CDV47PV7
1.	Gas Valve Assy.	1	37D0117	37D0118	37D0117	37D0118	37D0117	37D0118	37D0117	37D0118
2.	Pilot Assembly	1	37D0018	37D0019	37D0018	37D0019	37D0018	37D0019	37D0018	37D0019
2C.	Replacement Thermocouple	1	37D1067	37D1067	37D1067	37D1067	37D1067	37D1067	37D1067	37D1067
2I.	Replacement Igniter and Wire	1	37D1069	37D1069	37D1069	37D1069	37D1069	37D1069	37D1069	37D1069
2T.	Replacement Thermopile	1	37D1068	37D1068	37D1068	37D1068	37D1068	37D1068	37D1068	37D1068
3.	Burner Tube	1	54D0288	54D0288	69D0034	69D0034	69D0034	69D0034	69D0034	69D0034
4.	Flexhose with Shut-off Valve	1	69D0030	69D0030	69D0030	69D0030	69D0030	69D0030	69D0030	69D0030
5.	Rocker Switch	1	41D0048	41D0048	41D0048	41D0048	41D0048	41D0048	41D0048	41D0048
6.	Piezo Igniter	1	14D0503	14D0503	14D0503	14D0503	14D0503	14D0503	14D0503	14D0503
7.	Injector	1	58D0371	69D0226	59D0062	69D0079	20H3155	33D4046	20H3155	33D4046
8.	Burner Assembly	1	54D0200	54D0200	54D0001	54D0001	54D0329	54D0329	54D0329	54D0329
9.	Venturi	1	69D1119	69D1026	69D1119	69D1026	69D1119	69D1026	69D1119	69D1026
10.	Wire Assembly	1	44D0500	44D0500	44D0500	44D0500	44D0500	44D0500	44D0500	44D0500
10.	Wire Assembly	1	44D0501	44D0501	44D0501	44D0501	44D0501	44D0501	44D0501	44D0501

Accessories

Item	Description	Qty.	Part Number
11.	Thermostatic Remote Control	1	RCST, RCT, RCSTE, RCSTEB, RCSITE, WWTD
12.	Remote Control ON/OFF	1	RCB, RCMT, RCBE, WMTD
13.	Wall Switch Kit	1	MVWS
14.	Wall Thermostat Kit	1	WT

Fuel Conversion Kits - Millivolt

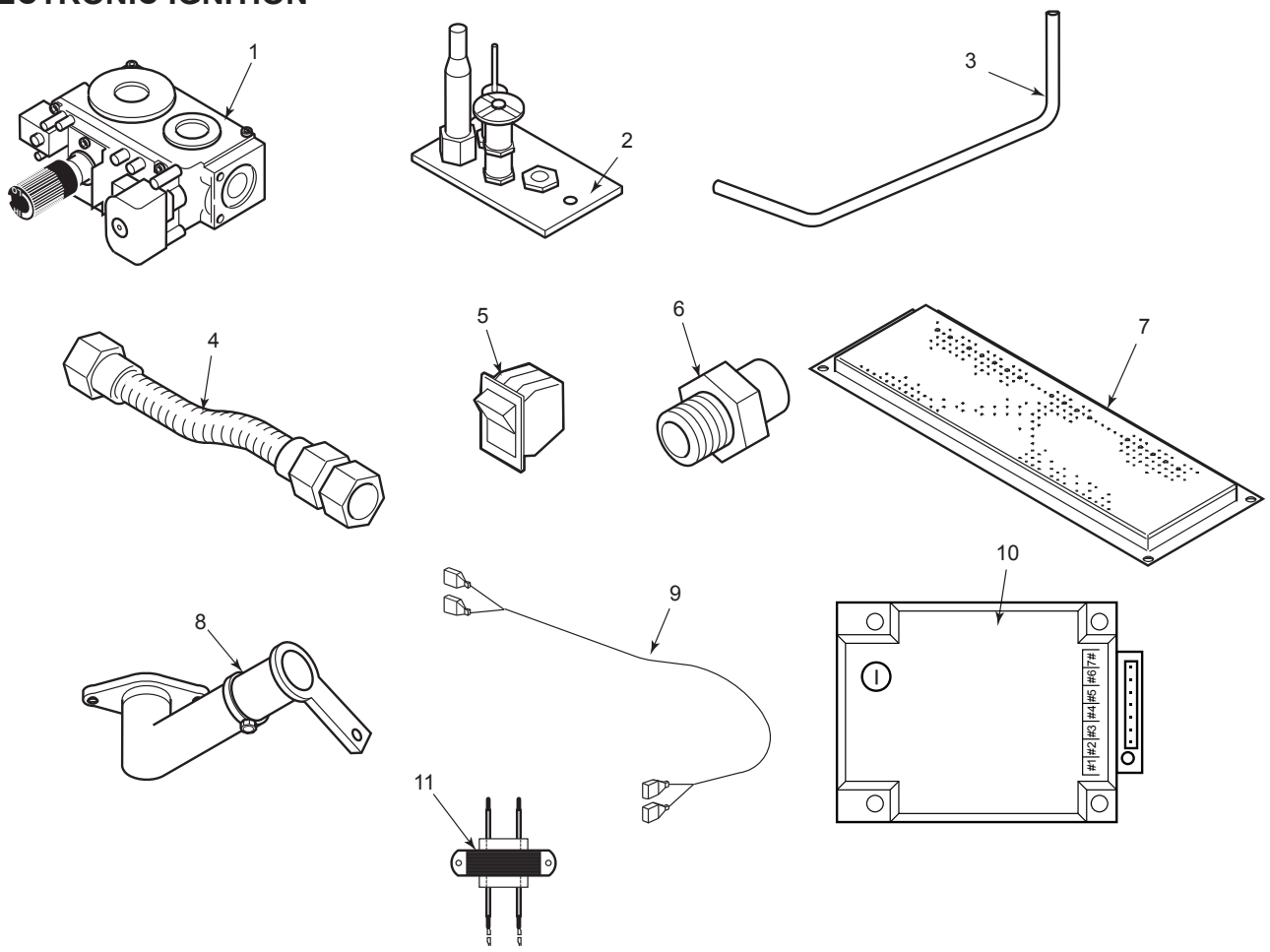
Natural Gas to LP

CDV33 Kit #CDV33CKP
CDV36 Kit #CDV36CKP
CDV42 Kit #CDV42CKP
CDV47 Kit #CDV47CKP

LP to Natural Gas

CDV33 Kit #CDV33CKN
CDV36 Kit #CDV36CKN
CDV42 Kit #CDV42CKN
CDV47 Kit #CDV47CKN

ELECTRONIC IGNITION



Item	Description	Qty.	CDV33NE7	CDV33PE7	CDV36NE7	CDV36PE7	CDV42NE7	CDV42PE7	CDV47NE1	CDV47PE7
1.	Gas Valve Assy.	1	37D0016	37D0017	37D0016	37D0017	37D0016	37D0017	37D0016	37D0017
2.	Pilot Assembly	1	37D0020	37D0021	37D0020	37D0021	37D0020	37D0021	37D0020	37D0021
3.	Burner Tube	1	54D0288	54D0288	69D0034	69D0034	69D0034	69D0034	69D0034	69D0034
4.	Flexhose with Shut-off Valve	1	69D0030	69D0030	69D0030	69D0030	69D0030	69D0030	69D0030	69D0030
5.	Rocker Switch	1	41D0048	41D0048	41D0048	41D0048	41D0048	41D0048	41D0048	41D0048
6.	Injector	1	58D0371	69D0226	59D0062	69D0079	20H3155	33D4046	20H3155	33D4046
7.	Burner Assembly	1	54D0200	54D0200	54D0001	54D0001	54D0329	54D0329	54D0329	54D0329
8.	Venturi	1	69D1119	69D1026	69D1119	69D1026	69D1119	69D1026	69D1119	69D1026
9.	Wire Assembly	1	54D0207	54D0207	54D2007	54D2007	54D0207	54D0207	54D0207	54D0207
10.	Ignition Module	1	37D0325	37D0325	37D0325	37D0325	37D0325	37D0325	37D0325	37D0325
11.	Transformer	1	37D0027	37D0027	37D0027	37D0027	37D0027	37D0027	37D0027	37D0027

Fuel Conversion Kits - Electronic

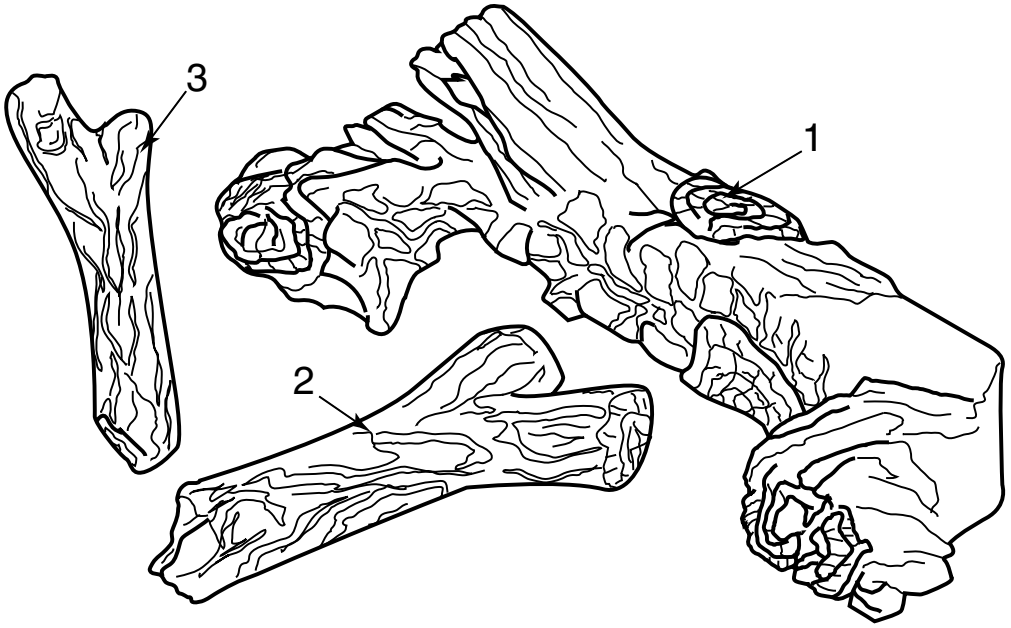
Natural Gas to LP

CDV33 Kit #CDV33CKEP
CDV36 Kit #CDV36CKEP
CDV42 Kit #CDV42CKEP
CDV47 Kit #CDV47CKEP

LP to Natural Gas

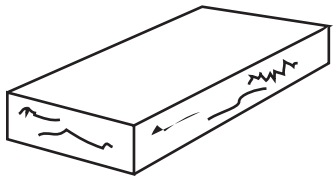
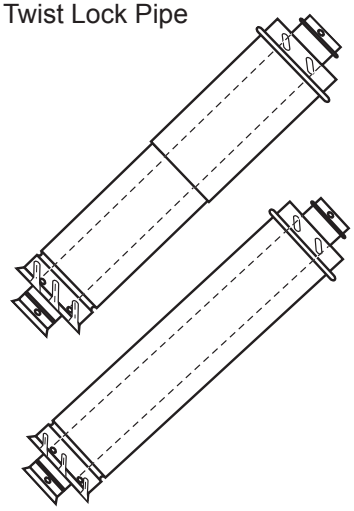
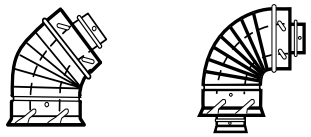
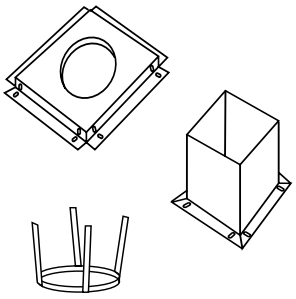
CDV33 Kit #CDV33CKEN
CDV36 Kit #CDV36CKEN
CDV42 Kit #CDV42CKEN
CDV47 Kit #CDV47CKEN

LOGS

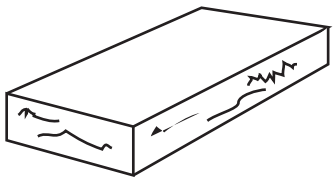
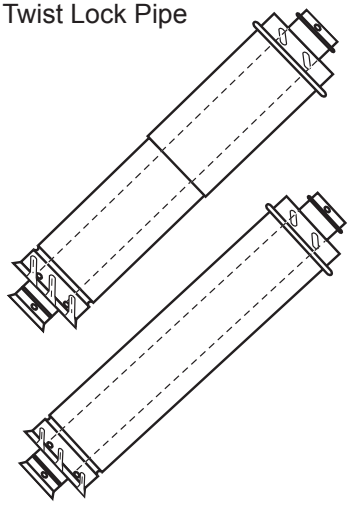
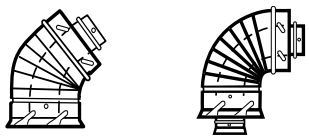
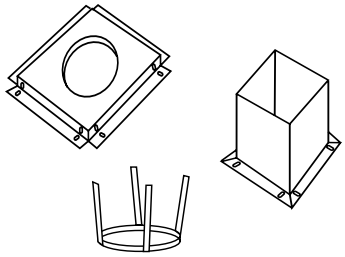


Item	Description	CDVR33/CDVT33	CDVR36/CDVT36	CDVR42/CDVT42	CDVR47/CDVT47
1.	Rear Log	54D0121	54D0181	54D0339	54D0339
2.	Right Log	54D0147	54D0116	54D0361	54D0361
3.	Left Log	54D0146	54D0115	54D0360	54D0360

VERTICAL VENTING

	Description	Model Number
Vertical Vent Termination Kits 	Vertical Vent Termination w/ Storm Collar (flashing NOT included)	7TDVSKV
	Vertical Vent Termination w/ Storm Collar - 8 pack (flashing NOT included)	7TDVSKV/8
	Vertical Vent Termination w/ 1/12 - 6/12 Flashing, Storm Collar and Ceiling Support Kit	7TDVSKVA*
	Vertical Vent Termination w/ 6/12 - 12/12 Flashing, Storm Collar and Ceiling Support Kit	7TDVSKVB*
	Vertical Vent Termination w/ Flat Flashing, Storm Collar and Ceiling Support Kit	7TDVSKVF*
Twist Lock Pipe 	20" Rigid Pipe - single pack	7TDVP20
	30" Flex Pipe - single pack	7FDVP30
	12" - 18" Adjustable Vent Length	7TDVP1218
	35" - 64" Adjustable Vent Length	7TDVP3564
	8" Vent Pipe - 4 pack	7TDVP8/4
	12" Vent Pipe - 4 pack	7TDVP12/4
	24" Vent Pipe - 4 pack	7TDVP24/4
	36" Vent Pipe	7TDVP36
	36" Vent Pipe - 30 pack	7TDVP36/30
	48" Vent Pipe	7TDVP48
	48" Vent Pipe - 30 pack	7TDVP48/30
Twist Lock Elbows 	45° Elbow for Vertical/Horizontal Offset	7TDV45
	45° Elbow for Vertical Offsets - 8 pack	7TDV45/8
	90° Elbow for Vertical/Horizontal Offset	7TDV90
	90° Elbow for Vertical/Horizontal Offset - 8 pack	7TDV90/8
Shields and Supports 	1" Firestop	7DV1FS
	1" Attic Insulation Shield	7DV1AIS
	Combination Horizontal Offset/Roof Support	7DVCS

HORIZONTAL VENTING

	Description	Model Number
Horizontal Vent Termination Kits 	Rear Vent Hot Touch Termination Kit w/ 10" to 16" Adjustable Termination Pipe, Firestop, and Hot Touch Termination w/ Siding Shield	7TBRHTK
	Up and Out Side Wall Termination Kit w/ 10" to 16" Adjustable Termination Pipe, 90° Elbow, Firestop, and Cool Touch Termination w/ Siding Shield	7TDVSCTK
	Rear Vent Cool Touch Termination w/ Siding Shield for Straight-out Applications and Firestop - 8 pack	7TRVCT/8
	Rear Vent Hot Touch Termination w/ Siding Shield for Straight-out Applications and Firestop - 8 pack	7TRVHT/8
	Termination Guard for 7" T.L. Rear Vent Hot Touch Terminations 97TRVT/7TSVKT)	7TRVTG
	Snorkel Termination	7TDVSNORK
	7" T.L. DVRTSB Termination Screen Guard	7TBSG
	Up and Out Starter Kit w/ 40" Flex Pipe, Firestop, Cool Touch Termination w/ Siding Shield, and 2 ea. Clamp Bands	7FDVSCTK
Twist Lock Pipe 	20" Termination Pipe - 8 pack	7TDVP20/8
	10" - 16" Adjustable Termination Pipe - 4 pack	7TDVPA/4
	12" - 18" Adjustable Vent Length	7TDVP1218
	35" - 64" Adjustable Vent Length	7TDVP3564
	8" Vent Pipe - 4 pack	7TDVP8/4
	12" Vent Pipe - 4 pack	7TDVP12/4
	24" Vent Pipe - 4 pack	7TDVP24/4
	36" Vent Pipe	7TDVP36
	36" Vent Pipe - 30 pack	7TDVP36/30
	48" Vent Pipe	7TDVP48
	48" Vent Pipe - 30 pack	7TDVP48/30
Twist Lock Elbows 	45° Elbow for Vertical/Horizontal Offset	7TDV45
	45° Elbow for Vertical Offsets - 8 pack	7TDV45/8
	90° Elbow for Vertical/Horizontal Offset	7TDV90
	90° Elbow for Vertical/Horizontal Offset - 8 pack	7TDV90/8
Shields and Supports 	1" Firestop	7DV1FS
	3" Firestop	7DV3FS
	1" Attic Insulation Shield	7DV1AIS
	Combination Horizontal Offset/Roof Support	7DVCS

Massachusetts Residents Only — Please read and follow these special requirements

NOTE REGARDING VENTED PRODUCTS
This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts.

Any residence with a direct vent product must have a CO detector installed in the residence.

Installation of the fireplace or vented gas log in the State of Massachusetts requires the damper to be permanently removed or welded in the fully open position.

In addition, a naturally vented gas log may not be installed in a bedroom or bathroom in the State of Massachusetts.

Flex line installation must not exceed 36 inches and must have a T shutoff valve.

NOTE REGARDING VENT FREE PRODUCTS
This product must be installed by a licensed plumber or gas fitter when installed within the Commonwealth of Massachusetts.

In addition, vent free products may not be installed in a bedroom or bathroom regardless of size or type in the State of Massachusetts.

Flex line installation must not exceed 36 inches and must have a T shutoff valve.

CARBON MONOXIDE DETECTOR REQUIREMENTS
(2) Revise 10.8.3 by adding the following additional requirements:

(a) For all side wall horizontally vented gas fueled equipment installed in every dwelling, building or structure used in whole or in part for residential purposes, including those owned or operated by the Commonwealth and where the side wall exhaust vent termination is less than seven (7) feet above finished grade in the area of the venting, including but not limited to decks and porches, the following requirements shall be satisfied:

1. **Installation of carbon monoxide detectors.** At the time of installation of the side wall horizontal vented gas fueled equipment, the installing plumber or gas fitter shall observe that a hard wired carbon monoxide detector with an alarm and battery back-up is installed on the floor level where the gas equipment is to be installed. In addition, the installing plumber or gas fitter shall observe that a battery operated or hard wired carbon monoxide detector with an alarm is installed on each additional level of the dwelling, building or structure served by the side wall horizontal vented gas fueled equipment. It shall be the responsibility of the property owner to secure the services of qualified licensed professionals for the installation of hard wired carbon monoxide detectors

a. In the event that the side wall horizontally vented gas fueled equipment is installed in a crawl space or an attic, the hard wired carbon monoxide detector with alarm and battery back-up may be installed on the next adjacent floor level.

b. In the event that the requirements of this subdivision can not be met at the time of completion of installation, the owner shall have a period of thirty (30) days to comply with the above requirements; provided, however, that during said thirty (30) day period, a battery operated carbon monoxide detector with an alarm shall be installed.

2. **Approved Carbon Monoxide Detectors.** Each carbon monoxide detector as required in accordance with the above provisions shall comply with NFPA 720 and be ANSI/UL 2034 listed and IAS certified.

3. **Signage.** A metal or plastic identification plate shall be permanently mounted to the exterior of the building at a minimum height of eight (8) feet above grade directly in line with the exhaust vent terminal for the horizontally vented gas fueled heating appliance or equipment. The sign shall read, in print size no less than one-half (1/2) inch in size, “GAS VENT DIRECTLY BELOW. KEEP CLEAR OF ALL OBSTRUCTIONS.”

4. **Inspection.** The state or local gas inspector of the side wall horizontally vented gas fueled equipment shall not approve the installation unless, upon inspection, the inspector observes carbon monoxide detectors and signage installed in accordance with the provisions of 248 CMR 5.08(2)(a)1 through 4.

(b) **Exemptions:** The following equipment is exempt from 248 CMR 5.08(2)(a)1 through 4:

1. The equipment listed in Chapter 10 entitled "Equipment Not Required To Be Vented" in the most current edition of NFPA 54 as adopted by the Board; and

2. Product Approved side wall horizontally vented gas fueled equipment installed in a room or structure separate from the dwelling, building or structure used in whole or in part for residential purposes.

(c) **Manufacturer requirements — Gas Equipment Venting System Provided.** When the manufacturer of Product Approved side wall horizontally vented gas equipment provides a venting system design or venting system components with the equipment, the instructions provided by the manufacturer for installation of the equipment and the venting system shall include:

1. Detailed instructions for the installation of the venting system design or the venting system components; and

2. A complete parts list for the venting system design or venting system.

(d) **Manufacturer requirements — Gas Equipment Venting System Not Provided.** When the manufacturer of a Product Approved side wall horizontally vented gas fueled equipment does not provide the parts for venting the flue gases, but identifies “special venting systems,” the following requirements shall be satisfied by the manufacturer:

1. The referenced "special venting system" instructions shall be included with the appliance or equipment installation instructions; and

2. The “special venting systems” shall be Product Approved by the Board, and the instructions for that system shall include a parts list and detailed installation instructions.

(e) A copy of all installation instructions for all Product Approved side wall horizontally vented gas fueled equipment, all venting instructions, all parts lists for venting instructions, and/or all venting design

LIMITED LIFETIME WARRANTY POLICY

LIFETIME WARRANTY

The following components are warranted for life to the original owner, subject to proof of purchase: Firebox, Combustion Chamber, Heat Exchanger, Grate and Stainless Steel Burners.

FIVE YEAR WARRANTY

The following components are warranted five (5) years to the original owner, subject of proof of purchase: Ceramic Fiber Logs.

BASIC WARRANTY

MHSC warrants the components and materials in your gas appliance to be free from manufacturing and material defects for a period of two years from date of installation. After installation, if any of the components manufactured by MHSC in the appliance are found to be defective in materials or workmanship, MHSC will, at its option, replace or repair the defective components at no charge to the original owner. MHSC will also pay for reasonable labor costs incurred in replacing or repairing such components for a period of two years from date of installation. Any products presented for warranty repair must be accompanied by a dated proof of purchase.

This Limited Lifetime Warranty will be void if the appliance in not installed by a qualified installer in accordance with the installation instructions. The Limited Lifetime Warranty will also be void if the appliance is not operated and maintained according to the operating instructions supplied with the appliance, and does not extend to (1) firebox/burner assembly damage by accident, neglect, misuse, abuse, alterations, negligence of others, including the installation thereof by unqualified installers, (2) the costs of removal, reinstallation or transportation of defective parts on the appliance, or (3) incidental or consequential damage. All service work must be performed by an authorized service representative.

This warranty is expressly in lieu of other warranties, express or implied, including the warranty of merchantability of fitness for purpose and of all other obligations or liabilities. MHSC does not assume for it any other obligations or liabilities in connection with sale or use of the appliance. It states that do not allow limitations on how long an implied warranty lasts, or do not allow exclusion of indirect damage, those limitations of exclusions may not apply to you. You may also have additional rights not covered in the Limited Lifetime Warranty.

MHSC reserves the right to investigate any and all the claims against the Limited Lifetime Warranty and decide upon method of settlement.

IF WARRANTY SERVICE IS NEEDED...

1. Contact your supplier. Make sure you have your warranty, your sales receipt and the model/serial number of your MHSC product.
2. DO NOT ATTEMPT TO DO ANY SERVICE WORK YOURSELF.

Canada

ENERGUIDE

Look for the EnerGuide Gas Fireplace Energy Efficiency Rating in this brochure

Based on CSA P.4.1-02

Efficiency Ratings	
Model	**EnerGuide Ratings Fireplace Efficiency (%)**
CDVR33NV7	62.6
CDVR33PV7	64.3
CDVR33NE7	66.8
CDVR33PE7	68.1
CDVR36NV7	47.7
CDVR36PV7	53.6
CDVR36NE7	49.7
CDVR36PE7	56.1
CDVR42NV7	66.8
CDVR42PV7	68.7
CDVR42NE7	71.0
CDVR42PE7	72.3
CDVR47NV7	65.6
CDVR47PV7	67.1
CDVR47NE7	69.6
CDVR47PE7	70.6
CDVT33NV7	45.9
CDVT33PV7	53.0
CDVT33NE7	47.6
CDVT33PE7	55.4
CDVT36NV7	47.7
CDVT36PV7	53.6
CDVT36NE7	49.7
CDVT36PE7	56.1
CDVT42NV7	56.3
CDVT42PV7	64.3
CDVT42NE7	59.1
CDVT42PE7	67.6
CDVT47NV7	54.2
CDVT47PV7	62.4
CDVT47NE7	56.6
CDVT47PE7	65.7

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